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Fixing Blame for the News Print Situation

Premiers of Quebec and Ontario Exchange Long Communications — Disclaim Responsibility for the Circumstances in Which the Industry Finds Itself—Newspapers Point To Continuous Procession of New Mills and Fact That Sales of Timber Limits Recently Have Contained Clauses for Erection of New Mills

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., November 12, 1928.—After the first shock of the staggering revelation that cut-throat price competition has broken out in virulent form in the news print industry, more attention is being given, apparently, to the question as to who is responsible than to the question as to how and where a remedy can be found. The Premiers of Quebec and Ontario have been exchanging long-distance communications, the effect of which has been the endeavor to show the public that neither is responsible for the fact that the long-talked-of conference between their respective governments for controlling the output of news print has never been held. Each also has endeavored to make it plain that his government has been discouraging new companies from entering into the news print manufacturing industry. Against this latter contention the newspapers have been pointing to the continuous procession of new mills and enlargements of existing mills, and to the fact that in every one of the agreements for the many sales of timber limits the respective Provincial governments have inserted a clause calling for the erection of a mill of specified capacity being put into production within a certain specified period of time.

Great News Print Enterprises

Of great news print enterprises launched into production comparatively recently in Quebec, an imposing list could be prepared, and the same is true of Ontario, to say nothing of those in other provinces. In the meantime, the Kenora mill of E. W. Backus is coming into production.

For trade reasons the Fort William Pulp and Paper Company's project at the head of the lakes has been held up, contrary to sale agreements with the Ontario Government, which required erection and operation on a specified scale within a stated period. While the Government, owing to the over-production situation is not pressing fulfilment of this contract the company may, when it deems the situation favorable, proceed with its plans and put the mill into operation.

A somewhat similar situation obtains with respect to the Nipigon Fibre plant, which was sold by the Timmins interests to the International Paper Company. This plant has operated, and is now ready to operate again, at the will of the owners.

In the same district is Thunder Bay Paper Company, also ready to enter upon completion of its contractual obligations as soon as it deems the situation favorable. The Government in this case, also is not pressing for performance.

In New Brunswick the International Paper Comvany has commenced operations on its new news print mill at Dalhousie, N. B. Other New Brunswick pending developments of the company include a new sulphite mill on the Miramichi River and another pulp mill at St. Leonard, which will manufacture pulp which in turn will be pumped across the international boundary to one of International Paper's paper plants on the U. S. side of the border. Then the Bathurst Company is enlarging its news print plant.

In Nova Scotia work is going ahead on a 250-ton news print mill, to be ready by December, 1929, and only within the last few weeks it has been announced that the McLaren interests will erect a 200-ton news print mill at Buckingham, Que.

Prospects Not Hopeful

Possibly the publication of all these facts will bring the governments and the interests concerned into agreement as to a means of controlling production, but it must be said that at present the prospects in this direction do not look hopeful. No real relief is looked for from an encouragement of news print consumption by unprofitable prices, for that will only aggravate another crisis looming on the horizon, namely a news print famine in the not-distant future, owing to the rapid destruction of the forests. Every day costs in news print production are rising, owing to the companies having to go farther and farther afield for their pulp wood.

The hope is now expressed that news print prices will be stabilized for the coming year at around $52 per ton, and the companies are drawing whatever comfort they may from this hope. Many news print executives look for a three-year depression in the industry.

One result is the announcement this week that the Wayagamack Pulp and Paper Company is switching over to a large extent from the news print manufacture at the Wayagamack News, Ltd., mill to production of waxed paper to be used chiefly for wrapping bread, contracts having already been made on favorable terms.

New Sulphite and Kraft Mills

Property purchases by the International Paper Company at Morrison's Cove, N. B., are taken as indicating the first step of the company towards the building of the new 100 ton sulphite mill to be erected on the Miramichi River. Development of a $2,000,000 pulp and paper plant at Port Mellon on Howe Sound, about 20 miles from Vancouver, will be started shortly by the Vancouver Kraft Company, Limited, it is announced. Preliminary work will commence this week.

The Kraft Company, representing the Columbia River Paper Company, of Washington, Oregon and California, which recently

Bergstrom Paper Co. Builds New Power House

Equipment Includes Three Boilers From the Erie City Iron Works and All the Most Up-to-date Accessories—Building Is Designed So That a Fourth Boiler Can Be Installed If Needed

Wisconsin Conservation Commission Meets

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., November 12, 1928.—Installation of equipment in the new power plant of the Bergstrom Paper Company, of Neenah, Wis., is about completed and plans are being made to cut over to the new unit.

In doing so the company is abandoning a plant which is only fifteen years old. Yet more efficient production and lower costs led the company to capitalize on the scientific methods of today and obtain the latest in equipment.

The new building housing the power plant is 60 by 119 feet in size and is of steel, concrete and brick. Equipment includes three boilers from the Erie City Iron Works. They are of 565 hp. each, and are of the drum bent tube type, equipped with two drum integral economizers. The boilers are designed for operation at 350 pounds pressure at the boiler and 160 degrees super heat. They are equipper with water screens on the side walls and bridge walls are arranged for stoker firing. Breechings from the furnace have been made extra large. The new chimney is 185 feet high and its top inside diameter is 11 feet.

Accessory equipment includes forced and induced draft fans, a lime soda water softener, and a de-aerator capable of operating under 50 pounds of pressure. The boilers also have feed water regulators, complete combustion control apparatus and a "blow down" into the silencing tank.

Coal Crushing Apparatus

Coal crushing apparatus, elevators and conveyors are supplied for automatic feeding into a 200-ton bunker. A two-ton larry will send the coal into the stoker hoppers. The ash storage capacity will be ample for 24 hours, with automatic dumpers for use with motor trucks.

Steam will be supplied to a 2500-KW. turbine in the turbine room. The installation has been made so the steam pressure and temperature furnish electricity for power purposes and steam for process work in the mill, with steam going to a condenser. The switchboard is to be operated with remote control.

With this equipment available, the mill is protected against delayed production. Two boiler units are sufficient for the needs and the third will be kept as an auxiliary. In extreme cases, it will be possible to operate with one boiler. The building has been so designed that a fourth boiler can be installed if expansion warrants it. Lockers and an electric washing machine have been provided for the employees.

Conserving Pulpwood Supply

Efforts to save the thousands of small pines that are slashed out of the woods annually will be made by the Wisconsin Conservation Commission, according to a decision reached at its monthly meeting last week. Conservation wardens will arrest all who take trees from state owned property, and hope by this method to stop some of the waste that is affecting the pulpwood supply.

The commission met at Wisconsin Rapids, Wis., and while there inspected the 3,000-acre reforestation project of the Nekoosa-Edwards Paper Company. A resolution then was adopted commending the company for its action and foresight.

Encouragement will be given all who devote cutover lands to tree growing. The state and private owners will be allowed to enter into partnership under the new forest crop tax law. The owner and the state make a fifty-year agreement by which each pays a tax of ten cents an acre during the period and each shares in the expenses of the project. At the end of fifty years the state receives ten per cent of the stumpage value.

General News of the Industry

Frank B. Whiting, of the George A. Whiting Paper Company, Menasha, Wis., was a near victim of a rifle bullet recently. While motoring in the evening near the city, the bullet passed through the windows of his car, shattering glass on two sides of the car. Luckily, however, it missed the occupants. It is believed hunters were responsible, but the person who fired the shot was not located.

The importance of rag paper for the preservation of permanent records was explained by T. M. Gilbert, of the Gilbert Paper Company, in an address before the Kiwanis Club of Neenah, Wis., last week. Mr. Gilbert mentioned the need of printing newspapers on this stock if they are to be preserved for any length of time, and referred to some of the large dailies that follow this practice.

Arnold Rogers, an employee of the Fox River Paper Company, Appleton, was injured last week when both of his arms were caught between two heavy rollers of the machinery. No bones were broken but he was cut and bruised quite severely.

Keyes Fibre Co. To Build Canadian Factory

The Keyes Fibre Company, manufacturer of "Paprus" plates and dishes from spruce fiber, with factory at Waterville, Maine, will establish a factory in Canada.

"For the purpose of rendering better service to our Canadian friends," says the company in an announcement, "the decision has been made to establish a manufacturing plant in Canada.

"The new plant will manufacture 'Paprus' pie plates, 'Savaday' tableware plates, and 'Paprus' butter dishes.

"The new machinery for operation in the Canadian plant will be completed and ready for installation sometime in the month of April, next, and the plant will probably be in production sometime in June, next.

"The exact location of the plant has not been definitely determined. We have several locations under consideration and will decide definitely on the location before the machinery is ready for installation.

"The tariff duty which our Canadian customers have been required to pay on shipments from the United States has worked a burden upon them and the consumers in Canada which we hope to relieve to a very great extent, and it probably will be possible for the new Canadian-Keyes Fibre Company to establish the same prices f.o.b. their Canadian factory as the Keyes Fibre Company, Inc., sell their product f.o.b. their waterville, Maine, factory.

"This is a move which has been contemplated by us for some years but until now we have not considered it an opportune time to act."

Change Name to Rising Paper Co.

HOUSATONIC, Mass., November 14, 1928.—Announcement is made of the sale of the B. D. Rising Paper Company to a new corporation to be known as Rising Paper Company. The officers of the new company are: Walter J. Raybold, president; Benjamin A. Franklin, vice president; Horace A. Moses, treasurer.

Two of the officers of this company will be recognized as officers of the Strathmore Paper Company, which company will be an active interest in the Rising Paper Company affairs hereafter.

All active lines, trade brands, and trade relationships with the old company will be continued by the new company, which will handle its affairs as an independent corporation.

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Paper Lines Show Improvement in Chicago

Wrapping Paper, Coated Papers and Boards Are in Especially Good Demand—Trade Practice Conference at Which Matters of Special Interest to the Board Industry are Discussed Is Well Attended—Noble Gillette to Address Paper Salesmen's Association

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, November 12, 1928.—With the Presidential election definitely out of the way Chicago paper men are stepping into a brisk fall trade that should last at least until inventory time rolls around again. Practically all lines of paper show a decided improvement as buying becomes more general with the papers definitely allied with the holiday season stepping out into the lead. The wrapping paper line, coated papers and the board market are doing especially well with the large production being taken up by a brisk demand. The board market is reported to be at its "peak" with this condition expected to exist until after the holidays. Fine papers are exceptionally strong, in comparison with their position a few short months ago and since the middle of last month fine paper merchants have some genuine business to handle. Orders for tissue papers are reported to be considerably ahead of production. The lower grades of waste paper are experiencing more firm prices with conditions in lines necessary to the manufacturing of board especially improved.

Trade Practice Conference

The Trade Practice Conference conducted by the Federal Trade Commission at the Hotel Sherman, Chicago, Saturday morning, November 3, was one of the most widely attended and successful affairs of this kind ever held in Chicago. Over 200 business executives attended the meeting to discuss trade customs and general trade problems of interest to the entire paperboard industry. Prior to the Saturday session a number of executives in the industry had answered an announcement sent out from the Chicago offices of the Paperboard Industries Association to its members to attend a preliminary meeting November 2 and at that time availed themselves of the opportunity of preparing an advance discussion for the following day.

As a result the decks were cleared for a quick and concise discussion of problems that, when solved, will mean a great deal to the industry. Sixteen resolutions were adopted at the Saturday morning session, each resolution in reference to the conducting of good business practices. Included in the list adopted were resolutions relative to misbranding, rebating, selling below cost and other kindred problems of the industry. A great deal of satisfaction was expressed over the progress made in the Trade Practice Conference.

The James White Paper Company, distributors of book and cover papers in the Chicago territory, recently sent out an announcement to the Chicago trade of interest to paper merchants because of its candid statement in an effort to give the best service. In part the statement read: "We emphasize again our desire to cooperate with the printing trade on the matter of calling. Our salesmen will call at any time at your indication. Our merchandise is not in demand every day by every customer and daily calls would be impractical to yourselves and ourselves. Our salesmen are always ready at your request. The printed piece has already drawn a noteworthy amount of favorable comment and seems to please the printers who are reported as being in sympathy with this perfectly sane piece of logic.

Noble Gillette To Address Salesmen

Noble Gillette, president of the Chicago Paper Company and president of the National Paper Trade Association, is to be the speaker at the Monday, November 12, meeting of the Chicago division of the Salesmen's Association of the Paper Industry. The Hamilton Club, where all luncheon meetings are held, is expected to be well filled with salesmen to hear Mr. Gillette discuss problems of interest to the trade. Mr. Gillette is the second speaker in a series of programs designed to bring the salesmen in closer sympathy and understanding with general conditions in the industry. Two weeks ago Leo Altholz of the Inlander-Steindler Paper Company and president of the Chicago Paper Association, talked from the standpoint of the coarse paper merchant, while Mr. Gillette is expected to take up the discussion from the viewpoint of the fine paper merchant.

W. E. Dwight To Leave for Florida

W. E. Dwight, of Dwight Brothers Paper Company, and Mrs. Dwight are leaving November 15 for their annual vacation in Florida. They maintain a winter home in Naples, Florida, and take up their residence there as soon as winter seems unpreventable in this section. Mr. and Mrs. Dwight will motor to Florida this fall, stopping en route to make several visits among friends along the way.

The LaSalle Paper Company, 847-855 West Adams street, Chicago, has recently sent out to the trade an unusual broadside printed on Goldenrod Bantam Manifold, unglazed, the quality of paper proving an attention getter even before the broadside is read. "And I want it today" is the title of the message. It calls attention to the fact that shipments immediately desired are filled at once because of the large reserve stocks carried in the Chicago warehouse. Three grades of paper are advertised in conjunction with the feature of immediate attention to rush orders—Bantam Manifold, a tough lightweight paper making from 12 to 16 carbon copies at one typing and serviceable for printshop and office, coming in white, blue, canary, green, cherry and goldenrod; Ledger Index, an index bristol useful for a filing system, in white, salmon, green, blue, cherry, canary, fawn and buff; and Superfine Index, a medium priced bristol made solid on a Fourdrinier machine and in white, blue, fawn, salmon, cherry, green, canary and buff.

Buys A. Willard Case Co.

[FROM OUR REGULAR CORRESPONDENT]

MANCHESTER, Conn., November 12, 1928.—The Rogers Paper Manufacturing Company, South Manchester, has bought the plant and equipment of the A. Willard Case Company, of Manchester. The latter company formerly manufactured a similar line of press board and transformer board. The purchase was made to facilitate greater and quicker production in present lines and also to make easier the development of new products, an expansion made necessary by the large and increasing volume of business being handled by the company. The Rogers Company has taken immediate possession of the Case plant and will begin at once to bring this mill up to a high standard of manufacturing efficiency. No additional issue of securities will be made, as the Rogers company has ample cash on hand with which to finance the purchase. The current treasury position is excellent, with the balance of September 30 showing a current asset ratio of approximately 10 for 1.

Cost and Technical Association Meets

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., November 12, 1928.—A display of graphic charts and their use in the paper industry was given at the Wednesday evening dinner session of the Cost and Technical Association of the Paper Industry, who met at the Columbia Hotel. The speakers were E. J. Turner and A. C. Dreshfield, of the Papermakers Chemical Corporation. Their talks were extremely valuable. Harry C. Bradford gave the report on the recent cost convention in Cleveland.

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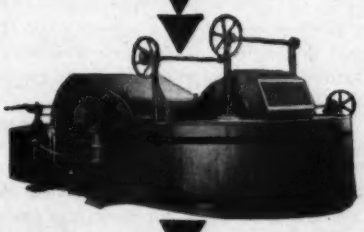

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Boston Paper Prospects Unusually Good

October Was Very Satisfactory Month and Business Continues to Improve—Considerable Interest in Regular Lines of Kraft With the Price Trend Upwards—Fair Amount of Business Is Reported in the Board Market—Paper Merchants Meet

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 12, 1928.—Prospects for the paper trade locally are bright for at least several weeks. Current business is generally active. All the Boston jobbers enjoyed a satisfactory volume of orders during October in both fine and kraft papers, according to reports in the trade. At the office of John Carter & Co., Inc., it was stated that the month showed a good improvement. At another office where fine paper is sold, the reply to the question, "Is business good?" was, "Better than that." While there is much interest in the regular lines of kraft, the demand for specialties is gratifying. The trend of prices in kraft is upward. The box board market is about the same, with a fair amount of business.

In old papers, No. 1 books heavy are very strong and quotable at 1.55 to 1.60, some naming even 1.65. Old kraft is quotable at 1.90 to 2.00. No. 1 mixed paper is down, one of the large consumers having lowered the price. This grade is now quotable at .55 to .60, compared with a previous range of .60 to .65. There is no change noted in the price of bagging or new domestic rags. In old domestic rags, No. 1 roofing stock is worth 1.65 to 1.75.

New England Paper Merchants Meet

The regular meeting of the New England Paper Merchants Association was held at the Harvard Club of Boston, Thursday evening, November 8, with President Matthew O. Byrne presiding. Some 33 attended. A reception preceded the dinner. The speaker of the evening was Charles P. Garvin, recently appointed general manager of the National Stationers' Association of the United States, and for the last twelve years the general sales and advertising manager of F. S. Webster Company, this city. In his talk on "Value of Association Work," Mr. Garvin stressed the importance of keeping the salesmen informed in regard to association work. The stationers' association, he said, frequently has salesmen as guests at the meetings and the result has been beneficial to all.

President Byrne appointed Floyd H. Blackman, who is secretary of the association, as delegate to the New England Conference, to be held in Portland, Me., November 15 and 16. He appointed the following as members of the nominating committee to present names of candidates to be voted on at the annual meeting January 10: C. S. Proctor, chairman, H. E. Waite, H. L. Carter, C. A. Shaw and Willard Loud. The sentiment in favor of closing today, on account of Armistice Day, was almost unanimous, and those in the minority were willing to do like the others.

Employees of Bird & Son Meet

The first meeting of the season of the Bird Club, composed of employees of Bird & Son, East Walpole, Mass., was held with about 400 present. The new president, S. W. Gladding, presided, and gave the address of welcome. A dinner, served at six o'clock, was followed by an entertainment by talent from Boston, including a dancer and violinist.

Walter P. Simmonds Back from Europe

Walter P. Simonds, treasurer and general manager of the Train Smith Company, returned last week from a nine-weeks trip to England and the Continent. He says that dealers in those countries are asking so much for their rags that America is not buying, to any great extent, at least. Dealers over across say they can get better prices there, but it is also stated that they are not selling in large quantities.

General News of the Trade

The Boston office of the United Paperboard Company reports a good business. The Benton Falls (Me.) Mill of the company is now operating, making light-weight chip and news board. The equipment includes an 80-inch trimmer.

John Carter & Co., Inc., have become distributors of Skyroa, a new line of cover, made by the District of Columbia Paper Manufacturing Company. They are also agents for the new Corinthian Cover, made by the Geo. W. Wheelwright Paper Co.

Loomis & Co., New England representatives of the Beveridge Paper Company, Indianapolis, have received notice that that company is to stock its standard grades in Boston, New York and Baltimore.

G. Veerman, a member of the firm of J. G. Veerman & Zonen, dealers in paper and woolen mill supplies, Amsterdam, Holland, is calling on the trade here.

Western Board & Paper Co. Changes

KALAMAZOO, Mich., November 12, 1928.—Winship A. Hodge, general manager of the Western Board and Paper Company, has tendered his resignation and will retire from that concern in a month. This action was taken at a meeting of the directors held Wednesday. He will purchase interest in a business outside the paper industry.

Mr. Hodge came to the Western Board and Paper Company shortly after the close of the World War and his discharge from military duty. A. E. Curtenius, president and general manager, had been transferred to the Kalamazoo Paper Company as secretary-treasurer. Hodge succeeded him as secretary and general manager. He was later made a director of the company.

Another change at the Western Board, made over a month ago, but just disclosed, is the retirement of Jacob L. Parent as superintendent of the concern. He had held that office for over 21 years and is numbered among Michigan's best known board mill superintendents. Since his retirement here, he has been spending practically all his time at the Tonawanda plant of the Robert Gair Company.

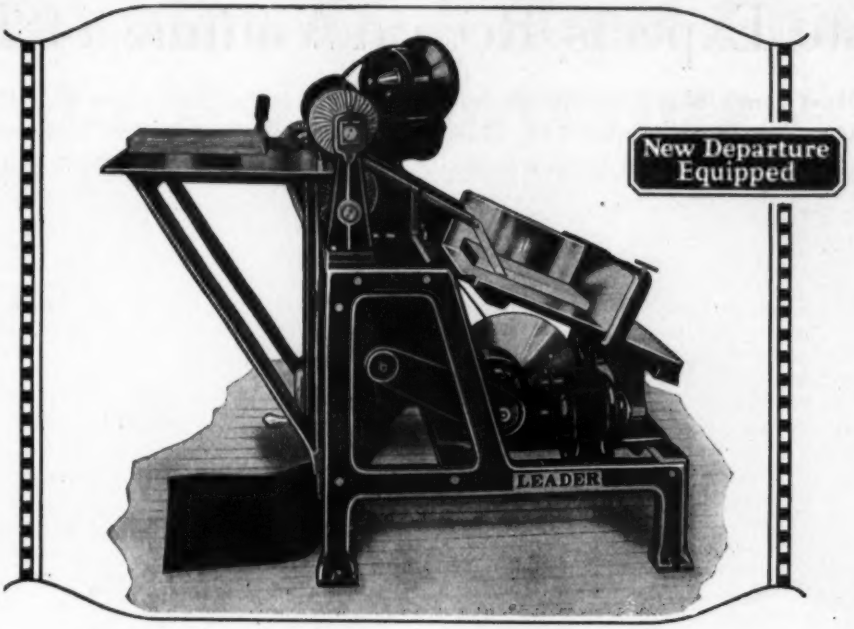
Planning Another Kraft Paper Mill

The International Paper Company is planning the construction of another kraft paper mill in southern United States with a capacity of about 200 tons a day. A careful study has been made of sites offering the most favorable conditions and several are now under consideration in the Carolinas. The company expects soon to announce the selection of one of these sites for the location of its new mill.

The plant will be the sixth southern kraft paper mill of International Paper Company and will increase the daily capacity of the company in this group of mills to about 900 tons of kraft paper and board. Two of the company's southern mills are at Bastrop, La.; a third is at Camden, Ark.; a fourth is located in Moss Point, Miss., and the fifth is the Mobile, Ala., mill now under construction.

Ace Bag Co. Incorporates

INDIANAPOLIS, Ind., November 14, 1928.—Articles of incorporation have been filed with the secretary of state of Indiana by the Ace Bag Company, Incorporated, of Indianapolis. The corporation has an initial capital stock of 100 shares of no par value and is formed to "acquire machines, equipment, materials, tools and everything necessary to manufacture bags of all descriptions both paper and cloth." The incorporators are Rudolph F. Vogel, Norman H. Vogel and Kennard O. Vogel.



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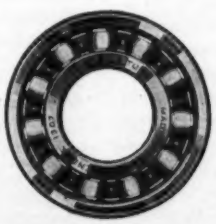

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Toronto Expects Record Volume of Business

October in Most Lines Was Best Month in Several Years and November Has Opened Very Satisfactorily—Provincial Paper Ltd. Has Passed Through Another Year of Uniformly Good Business—Abitibi Power & Paper Co. Reports Success with Swamp Drainage

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., November 12, 1928.—Jobbers had an excellent month during October in most lines, many of them reporting the best month they have had in several years, while November has opened up in such a manner as to justify belief that the year will end with a record volume of business. Even in the coarse paper section, there has been general improvement in conditions after some months of a draggy market. Up till recently the wrapping paper market has been characterized by comparatively small sales, but now ton and five ton lots are being disposed of by the wholesalers and occasionally an odd car load is sold. Very few firms are buying on that scale, however. The fact remains that the consuming public are beginning to stock up a bit and there is quite a good movement in wrapping paper and bags. Coarse paper mills are fairly busy and in the case of kraft paper some of the distributors have been complaining of difficulty in getting prompt delivery from the mills. The kraft industry has kept up well and was not materially affected when a quiet period struck the wrapping and paper bag markets.

A good volume of business is being done by distributors of fine papers and the market for the better grade bonds and ledgers is keeping up well. There is some slight unsettlement in regard to coated papers and cheap bonds and there is some talk of reducing prices on these owing to competitive liens coming in from outside. So far, however, they have been holding fairly firm and it may be that manufacturers will be able to tide over the situation without a downward revision of quotations. The next week or two will show whether or not this can be done. In the meantime the possibility of a reduction in both coated and the cheaper bonds looms ahead and it may come at any time. In other lines of books, bonds and ledgers the wholesale paper houses have to put their orders in a month ahead if they expect to get delivery from the mills in a reasonable time, for, in the case of the book mills, at least, there are orders in hand that will keep them pretty close to capacity operations until the end of the year. There has been no let up in the activity of the book mills all fall and summer. On the other hand, the coated mills are running somewhat light, although there has been some improvement of late. There is, however, little kick to the coated paper market, despite the fact that there is a fair demand from catalogue and publishing houses for stock.

The paper converting trade is fairly active and is showing gradual improvement throughout the province. Envelope manufacturing firms, for instance, are doing a fairly good business in both special and standard lines, and the loose leaf and stationery manufacturers report a good call for these lines. The demand for blank books is comparatively light but what is lost in this department is picked up by loose leaf manufacturers. The printing trade is none too brisk, generally speaking, although the larger printing and lithographing establishments are doing a good business and are consuming a fair amount of paper. Practically all of the board mills are busy despite considerable expansion in the industry in Ontario during the past year. Paper box and container plants are operating close to capacity under a demand that exceeds that of the same period last year and which promises to create a record in the carton industry in the province.

There is a strong demand for rag and paper stock. Prices on the best grade news have been raised from $18 to $20 per ton, and those on scrap paper from $14 to $16 per ton. But the demand for stock is stronger, if anything, than ever, and dealers are frankly sceptical as to whether the price increases mentioned are sufficient to have the desired effect of bringing additional supplies into the market in sufficient volume, for the leakage into the United States is of formidable dimensions owing to the more favorable prices obtainable from that quarter. Supplies are of fully as large proportions as they were last year at this time. But the demand is so much stronger that it is becoming a matter of importance to uncover fresh sources of supply if the dealers are to fill orders promptly and satisfactorily. Therefore, further price increases may be looked for before long, unless some easing up in demand occurs.

Provincial Paper Reports Good Year

Provincial Paper, Limited, head office Toronto and mills at Port Arthur, Georgetown, Thorold and Mile Roches, has passed through another year of uniformly good business. The various plants of the company have been fully occupied throughout 1928 to date and it is expected the volume of business for the year will be at least equal to that of 1927, with a good prospect of an increase over last year's figures. It is anticipated also that profits will compare favorably with those of last year. No important changes have been made in the price lists of the company's products, while orders on hand are reported to be of normal volume, sufficient to maintain plants at capacity well ahead.

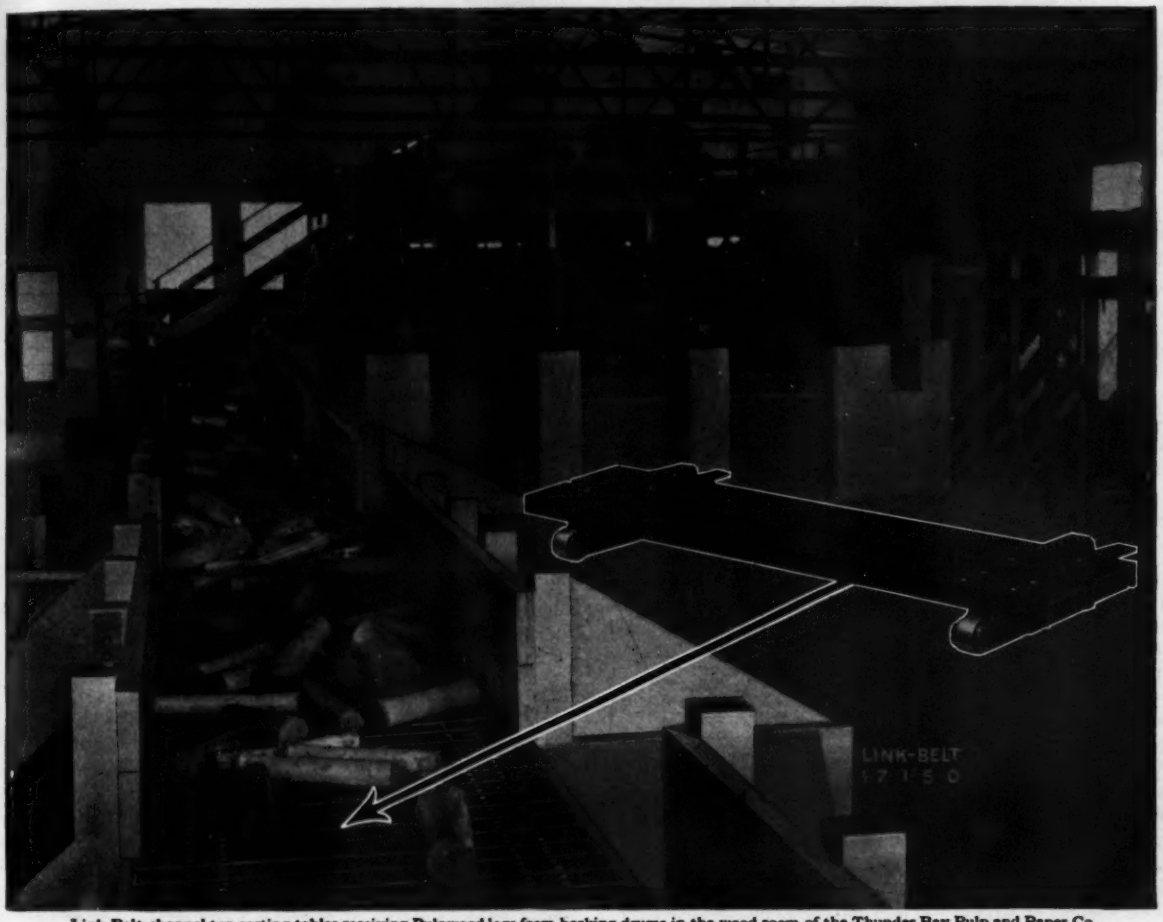
Only Rights to Cut Granted Pulp Firm

Cutting rights, on specific areas and under highly restrictive conditions, is all that Ontario sells when timber limits are put up for tender, Premier Howard C. Ferguson, Toronto, points out in the course of guarded comment upon the controversy, mainly centered in Quebec, respecting over-production of news print. The Prime Minister added that he had no information as to a conferonce which was mentioned in a statement by Premier Taschereau's of Quebec as likely to take place soon. Premier Taschereau's statement as published a few days ago alluded to the fact that at a conference in 1927 with interests affected, it was decided that the Quebec Government would not issue any more licenses for timber limits for paper manufacturing until things took a better turn; that the manufacturers had been asked to approach other Governments and that he understood Ontario had adopted that principle. "We did say some time ago that there was only room for about one more big pulp mill," commented Premier Ferguson, "but that is not to say that we cannot sell cutting rights on little tracts of timber which are tributary to existing mills." In the meantime there does not seem to be any prospect of an early meeting between the premiers of the two provinces and the paper manufacturers to discuss the news print situation.

Abitibi Co. Makes Muskegs Pay

With knowledge of the extensive and successful work done in other countries, and having considerable areas of suppressed spruce in swamp or muskeg types on the company's limits, H. B. Schanche, manager of the woods department of the Abitibi Power and Paper Company, Limited, Iroquois Falls, Ont., decided to carry on certain experiments to ascertain what the results would be of draining swamp areas in that district, and ditches were dug in 1922, draining certain areas, on which careful data has been kept and with most remarkable results. In the first year after drainage little difference in rate of growth was noted. In the second year the rate of growth in diameter increased up to 200 per cent. In the following years and up to the present or sixth year, the rate of growth has annually shown an increase of from 300 to 500 per

Use Genuine Link-Belt Chains On Your Conveyors



Link-Belt channel top sorting tables receiving Pulpwood logs from barking drums in the wood room of the Thunder Bay Pulp and Paper Co., Port Arthur, Ontario.

FOR sorting tables we recommend the Link-Belt channel top conveyor, using double strand of SS-96 Chain with K-4 Attachments every link.

For pulpwood conveyors, Link-Belt Combination Malleable Iron and Steel "C" Class Chain is ideally suited. For inclined runs this chain is furnished with "S" spur steel side-bar attachments.

We make all types of driving and conveying chains, and therefore are free to recommend without prejudice the best for the purpose.

We also design and build power plant elevating and conveying equipment, water-intake screens, crawler and locomotive cranes, portable loaders and unloaders, and power transmission equipment.

Have one of our experienced engineers look over your plant and make recommendations.

3573

LINK-BELT COMPANY

Leading Manufacturers of Elevating, Conveying, and Power Transmission Chains and Machinery

CHICAGO, 300 W. Pershing Rd. INDIANAPOLIS, 200 S. Belmont Ave. PHILADELPHIA, 2045 W. Hunting Park Ave. SAN FRANCISCO, 19th & Harrison Sts.

Ashland, Ky. - - - 100 W. Winchester Ave.
Atlanta - - - - 511 Haas-Howell Bldg.
Baltimore, Md., R. 800 Maryland Trust Bldg.
Birmingham, Ala. - 229 Brown-Marx Bldg.
Boston - - - - - - 1103-4 Statler Bldg.
Buffalo - - - - - 554 Ellicott Square
Cleveland - - - - - 527 Rockefeller Bldg.
Dallas, Texas 1101 Mercantile Bank Bldg.
Denver - - - - - - 520 Boston Bldg.
Detroit - - - - - 5938 Lindsale Ave.
Huntington, W. Va., Robson-Prichard Bldg.
Kansas City, Mo., R. 430, 1002 Baltimore Ave.
Louisville, Ky. - - - - - 349 Starks Bldg.
Los Angeles - - - 361-369 S. Anderson St.
Milwaukee - Room 1403, 425 E. Water St.
Minneapolis, Minn. - - 418 S. Third St.
New Orleans - - - - 621 S. Peters St.
New York - - - - 2670 Woolworth Bldg.
Oakland, Calif. - - - - - 526 Third St.
Pittsburgh - - - - - - 335 Fifth Ave.
Portland, Ore. - - - - - - 67 Front St.
Seattle - - - - - - - 820 First Ave., S.
St. Louis - - - - - - - - 3633 Olive St.
Utica, N. Y. - - - - - - 131 Genesee St.
Wilkes-Barre, 826 Second National Bank Bldg.

H. W. CALDWELL & SON CO.:—Chicago, 2410 West 18th St., New York, 2670 Woolworth Bldg. In Canada—LINK-BELT LIMITED—Toronto; Montreal; Elmira, Ont.

LINK-BELT

cent. The experiment, which has been carried on exclusively by the Abitibi Power and Paper Company, is considered a pronounced success, and the organization is about to launch a similar research project on a much broader scale, where complete and detailed data can be collected on the thousand and one phases which will present themselves in the course of such a study. It would seem from such very general observations as have been made to date that this project may possibly in due course show definitely the economy of adapting this form of soil treatment to vast areas in the northern parts of Ontario and Quebec, which are now either totally unproductive as muskegs or at best support only a more or less stunted growth and exceedingly slow-growing stand of timber, much of which cannot in the ordinary course of events become marketable for an indefinite period.

Provincial To Build New Offices

Preliminary plans will be prepared at once by a Toronto firm of architects for a fine new office building to be erected on University avenue, Toronto, by Provincial Paper, Limited. The firm has been located on that thoroughfare for some years, occupying the old Government House premises, but these have been sold in connection with a big building development and property was purchased farther up the street. The tentative plan will call for a two-story structure, 50x150 feet and of dignified type of architecture. It will also house the head office of the Interlake Tissue Mills, Limited, whose mills are at Thorold. Plans are also in preparation for the head office building of the Abitibi Power and Paper Company, whose head offices have hitherto been in Montreal. This building will also be on University avenue, adjacent to Provincial's office.

Government Lets Cutting Rights

Cutting rights in Stedman Township were awarded this week by the Ontario Department of Lands and Forests. The Hackquoil Brothers, Fort William, will be the licensees, having bid the highest price, namely $11.50 per thousand feet, board measure, for jackpine; $9.50 per thousand feet for spruce, and 30½ cents for ties. There is comparatively little log timber on the area, the proposition being almost exclusively relative to ties, of which it is estimated there are 85,750. The price for ties is regarded as exceedingly good, railway demands being reflected in increased tie operations this year. Competition in this area was keen and the department has the assurance that operations will commence at once. George Farlinger, who has large interests at Sioux Lookout, was the successful tenderer for cutting rights on a small area of timber land near Sunstrom Station, on the Canadian National Railway, District of Kenora. It is estimated by the Department of Lands and Forests to contain a half million feet of jackpine, and this will be logged and sawn in the mill, largely for tie purposes. The price is $9 per thousand feet, or 50 cents higher than the Crown's upset figures.

Embargo To Remain on Pulpwood

The Hon J. E. Perrault, minister of colonization, mines and fisheries, of Quebec, was in the Abitibi and Rouyn districts a few days ago, where, with his deputy minister, L. A. Richard, he was extended a hearty welcome. In an address before the board of trade of Amos, the minister stated that the Government would pay two-thirds of the cost of maintaining winter roads indispensable to the big mining projects, and that permanent roads would be constructed for the mines in production. Replying to a complaint that the embargo on the export of pulpwood to the United States was detrimental to the well being of the district, Hon. Mr. Perrault affirmed that to lift this embargo would be impossible, but that means would be devised to ameliorate the existing conditions.

Notes and Jottings of the Trade

The Arrabol Manufacturing Company has perfected a new process of making rosin sizing for paper treatment which will eventually be introduced into Canada by its Canadian agents, Paper Sales, Limited, Toronto. It is claimed that the new sizing produces a hard finished sheet at a saving of approximately twenty-five per cent in both the rosin and alum used in its manufacture.

Toronto wholesale paper houses are creditors to the extent of about $30,000 in the financial difficulties of the United Press, Limited, a large printing firm doing business on Richmond street, which is now being administered by a trustee. Books of the firm show a surplus of $118,201, but its position is that its assets, all in good shape, are in the form of real estate, machinery, type metal, etc., but it has no cash with which to carry on. It has $48,000 tied up in standing type, $58,000 in real estate, and $94,000 in machinery. Its total liabilities are placed at $163,000, while its assets are $282,000, none of them liquid at the moment. It is expected that all claims of creditors will be met, but in the meantime the trustee is receiving offers for the plant. Loss of big Government contracts for printing are said to have affected the company's business detrimentally.

The last issue of *Provincial's Papyrus*, the house organ put out by Provincial Paper, Limited, carries a picture and editorial appreciation of the company's late president, I. H. Weldon, whose death oscurred recently. The inside stock used is Maple Leaf Coated, white, while a very effective cover of Locarno bears a striking illustration appropriate to the Thanksgiving season.

Among the Toronto wholesale paper men to depart for the north country on deer hunting expeditions this week were J. W. Hewitt, head of Paper Sales, Limited, and Fred W. Halls, president of the Fred W. Halls Paper Company, Limited.

T. J. Allan, of Paper Sales, Limited, Toronto, has returned after a visit to a number of the board and paper mills in New York State. He reports the board mills as very busy with slightly lessened activity in the paper manufacturing industry.

Mrs. Georgia J. Weldon is named sole benefactor in the estate of her husband, Isaac H. Weldon, president of Provincial Paper, Limited, who died in Toronto recently. The properties of the estate are valued at $550,000 and application for probate of the will has been made.

Bowers Envelope Co. Incorporates

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., November 12, 1928.—The Bowers Envelope and Lithograph Company, which expects to be in operation by January 1 in Indianapolis, will have a daily output of 500,000 envelopes. Clyde A. Bowers is president and general manager and W. Myron Yorger is secretary and treasurer. The company has purchased a building at 937-947 West Michigan street, and installation of machinery will begin within a few days. The building is one story with basement, 120 feet long on Michigan street and 90 feet deep, with 25,000 square feet of floor space, including a balcony on the first floor.

The factory will start with 50 employees and a weekly payroll of $1,700, according to Mr. Bowers. It will manufacture a complete line of envelopes for direct sale to consumers, principally commercial and industrial users, either plain or lithographed. The principal trade area will be Indiana, Ohio, Illinois and Michigan.

Mr. Bowers is a native of Indianapolis and for nineteen years has been a salesman for envelope manufacturers. In recent years he has been with the Gaw-O'Hara Company, of Chicago, covering Indiana and parts of Ohio and Kentucky. He is reputed to have the largest individual envelope business in the country and as a manufacturer expects to increase his sales radius. Mr. Yorger, secretary and treasurer of the company, has been associated with Mr. Bowers for several years.

The company has purchased the equipment of an envelope plant in Chicago and removal is under way. Additional equipment will be bought at once. Selling agents will be established in Fort Wayne, Louisville, Ky., Dayton, Ohio, and Chicago.

The company has just been incorporated under Indiana laws with a capital stock of 1,500 shares of no par value common and $100,000 preferred.

This instrument measures and automatically records pounds of steam delivered to beaters in this mill

In this large paper mill a very complete installation of up-to-date instruments is located. One of the most valuable of these applications is the use of the Brown Electric Flow Meter for measuring steam to beaters. This instrument not only records the rate of flow, and integrates this flow into amount of steam indicated by a counter, but actually *records* the amount of steam on the same chart with the record of the rate of flow. Plant officials at this mill can read directly from the chart at any time the amount of steam delivered to the beaters for any period during the 24 hours covered by the chart. No other flow meter can give this service, so valuable in connection with many paper and pulp operations. Write for complete information.

The Brown Instrument Co.,
4457 Wayne Ave., Phila., Pa.
Branches in 20 principal cities

"To measure is to economize" —PASCAL

Brown Electric Flow Meter

On the Inductance Bridge Principle

Philadelphia Looks For More Active Demand

Bidding For Business Is Rather Keen Especially Where the Prospects are for Large Orders—Fine Papers Being Stocked in Limited Quantities for Immediate Requirements With a Few Price Concessions Reported by the Mills

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., November 12, 1928.—As the election excitement wanes and the trade has an opportunity to survey the business prospects there is encouraging evidence that the paper activity will continue to the end of the year, although present trading has dwindled in the matter of large volume demands. There is a tendency on the part of the consumer to hold to the policies of the past in the matter of paper purchases. The average consumer still clings to his habit of stocking in small quantities, this custom having been developed since the war days when rationed paper distribution made it imperative to confine his needs to smaller stocking. There also is the matter of economy in overhead to be considered by the consumer which follows in the wake of the small lot purchases, both in the matter of stocking space and the waste of stale paper goods which show the wear and tear of time.

Small Lot Buying Broadens

Although volume purchases are hard to secure and when landed are made at small margins of profits the growing small lot orders is indication of the expansion of business. While the trade experienced a slight flurry in the early weeks of the past month in the orders of larger volume paper goods, the present demand had drifted back to small lot stocking prevalent in normal times. Dealers are confronted with keen bidding for business among the paper houses and particularly where the prospects are for large orders. This keenness of competition which has appeared in the past fortnight has not yet affected prices on the smaller requirements which now are shipped but it has made inroads on the margins of profits where sparse orders of large volume of paper are needed. It is not likely that the paper market will be inundated by the competitive bidding of the distributors as mills seem to have the situation of production fairly well in hand on many of the standard grades of papers that will be in more plentiful use as the year draws to a close.

News Print In Competitive Lines

As the news print market enters a competitive stage the local trade is confronted with keen campaigning for orders. Extremely disturbed by the keen bidding for business despite the low supplies of stocks on hand, the few orders that are garnered are subjected to the recent inroads made on values. Dealers are short of supplies but despite this the recent announcement of a large manufacturer in price changes has led the consumer to believe that there is likely to be better opportunity for purchases later and so orders are withheld for the time being. Profits on whatever orders now secured are narrow despite this low stock of distributors. Several mills supplying the Philadelphia trade have announced a temporary shut down or curtailment of operations, pending more stabilized conditions in the news print field or pending, as they state, adjustment of wages to enable improved production conditions which will benefit both dealers and manufacturers. This adjustment of wages is necessary, the mills claim, to meet the keen competition. With a beneficial move on the part of the bituminous coal operators towards improved fuel prices, the paper manufacturers in this section are able to secure soft coal at the same rates prevailing throughout the dull summer months. There has been no seasonal advance in the price of bituminous coal so far this fall and paper mills in Pennsylvania have been benefited thereby so that a helpful factor in the cost of production is advanced and this with adjusted labor conditions soon will give the manufacturers an opportunity to resume operations on a standardized, equitable, price basis.

As the fine paper market continues to show the cautiousness of stocking only for present needs, a few price concessions have been made by mills in the local trade showing the tendency to adjust values to meet the needs of the keenly competitive conditions of the day. One mill producing M. F. book paper, during the week sent out a notice of a fractional reduction while another larger producer has announced a similar adjustment. The demand for papers in the printed grades is quieter except for seasonal supplies needed for the manufacture of stationery greeting cards, social stationery and mail advertising of holiday wares. Buying of printing papers is expected to resume when business gets under way, the expansions that will follow the election and its assurance that no disturbance of present prosperity is at hand. These, with advertising specialties, will be needed for the coming year's announcements and expansions of industry.

Kaydeross Paper Co. Opens Office

A Philadelphia representative has been secured to handle the products of the Kaydeross Paper Company, Rock City Fall, N. Y., through the addition of Frederick Brower to the staff of territorial salesman. Mr. Brower has secured offices in 226 Lafayette Building, from which he will handle the sales of the line of tissues, manilas and white, and anti-tarnish grades, produced by the mills under its control. The local representative made the rounds of the Philadelphia trade in the week announcing the new policy of local sales.

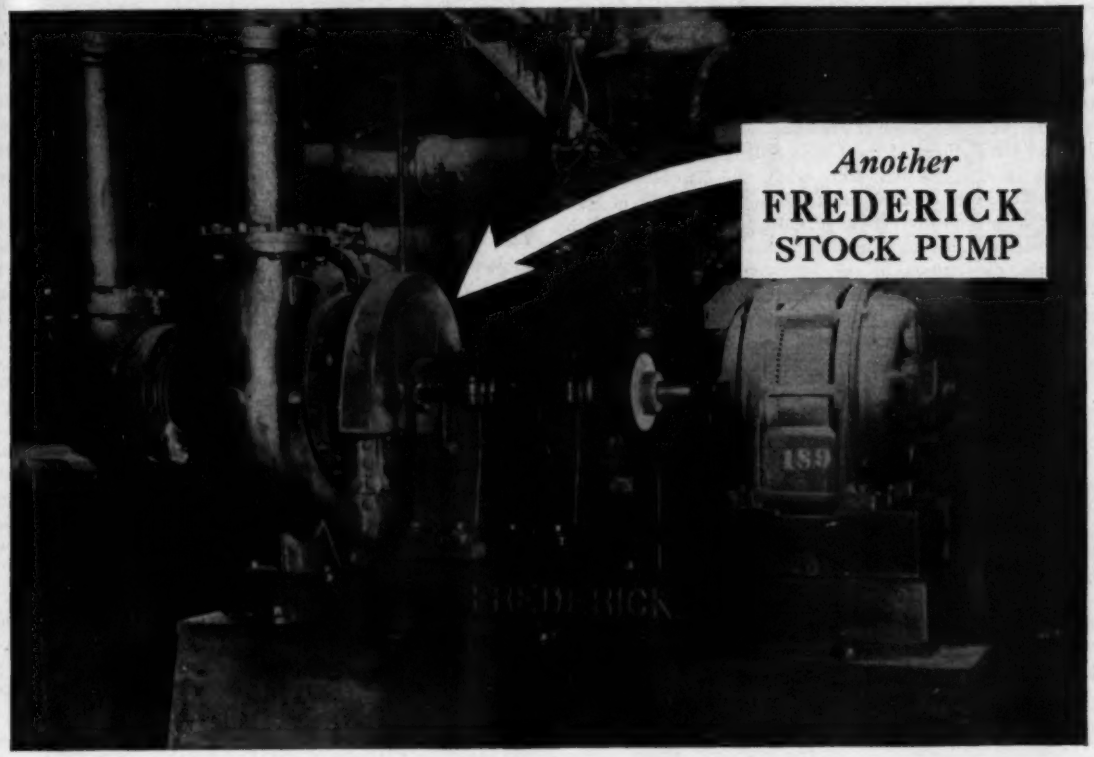
John M. Driver Co. Develops Art Department

As the demand for original and artistic creations in converted papers for wrapping purposes becomes the factor for high grade merchandise coverings, the John M. Driver Company, 57th street and Lancaster avenue, is giving particular attention to its art staff and its personnel. The firm is one of the largest converters of glassine and fancy wrapping and bag converters in this section and within recent months has made its cellophane department a notable division of the business by the perfection of printing devices that will print on this transparent covering for display bags and wrappings. There now is a large staff of artists employed in creating original designs for the trade and for customers in the consuming field. This staff of artists is employed in making up designs for the customers along the lines of modernistic trend with striking and colorful effects. John M. Driver, head of the firm, states that if the glassine and wrapping converters are to make progress in their business in the present day they must give particular attention to creative designs and sketches and effective colorings in imprints of the coverings of their wares as successful advertising and merchandising factors. There is strong demand for the originally designed motifs in bags and glassine wrappings as well as the new cellophane printed bags in the Driver lines and factory forces are employed, in night and day shifts, meeting the needs of the holidays and standard requirements of the trade and consumers. The equipment of the firm also has been extended with the development of artistic printing and many new patented printing units are attached to the equipment of the plant which enable the printing of these modern wraps. Six new artists have been added to the staff, for designing in bags, glassine wraps, and box covers of glassine and other paper foundations.

Wilder Bros. Develop Waterproof Paper Department

As the winter season approaches and the demands for waterproof and weatherproof papers increases, the firm of Wilder Brothers adds to the waterproofing specialty department which is an important department of the business, located at 12th and

Results speak Louder than Words



Above: a 10" Single Suction Open Impeller Frederick "Stock Pump" installed in a well-known Paper Mill. Pump was designed for 2000 G.P.M. against a 20' head. It is driven by a 20 H.P. 570 R.P.M. "G.E." Motor.

Of the total horsepower required to operate a Paper Mill, the "moving of stock alone", accounts for a large portion.

Such being the case NUMEROUS PROGRESSIVE PAPER MILLS decided that THE ONE "SURE WAY" TO LOWER POWER COSTS was to purchase stock pumps which would MOVE THE NECESSARY QUANTITY OF STOCK WITH THE LOWEST POSSIBLE POWER COST,—naturally, they turned to a Pump Manufacturer who "made a specialty" of Paper Mill Pumps.

As we have so "modestly" intimated, Frederick Stock Pumps are widely used in Pulp and Paper Mills, simply because they're designed and built just for that purpose.

"—We have had two of these pumps in operation for about 18 months pumping bleached and unbleached sulphite stock at a consistency of approximately 3% or 3½%. We have had no occasion to open-up either pump during this period. The pumps are built very sturdy and reliable and we find this type of pump is far superior to the type of pump built along lighter and finer lines——

"We can endorse Frederick Pumps and do so truthfully."

Name upon request

You would no doubt be interested in our Special "Paper Mill Bulletins." Copies upon request.

FREDERICK PUMPS

The FREDERICK IRON & STEEL CO. FREDERICK, MD.

You might also care to tell us your Pumping Troubles and let our Engineers tell you what they can do for you?

-and Experience begets Confidence

Brown streets. The firm has provided for larger stocking facilities of the Angier Mills line, for which it is local distributor and representative. With the increasing business in waterproofing papers the needs of the trade and customers are now amply provided for by this increased stocking in the local warehouses. There has been a wide demand for case linings of the Angier grades, as the weather grows cooler.

Curtis & Bro. In New Quarters

Curtis & Bro., for more than 25 years located at the corner of Ludlow and 5th streets, where the retail division of the Quaker City territory was located, is now quartered in the new offices just taken over in the Public Ledger Building in suite No. 960. The executive and sales offices of the Curtis & Bro. Mills, of Newark, Del., are assembled in the new office where the distribution needs of the trade are being executed under the sales manager and vice president of the company, Irwin F. Magargee, and where the president, Charles M. Levis, is located. The warehouses and sales offices for the distribution in the Philadelphia field have been closed as the mills announce the transfer of the distribution of the Curtis line of standard printing papers to the fine paper dealers, A. Hartung & Co., Inc., 506-512 Race street.

Satterthwaite-Cobaugh Co. Distributes New Covers

The attractively gotten up set of samplers, arranged by the George W. Wheelwright Paper Company, Leominster, Mass., in the line of cover papers just announced by the manufacturers, is being sent to the trade by the local distributors, the Satterthwaite-Cobaugh Company. Under the title of the new cover mark, the Corinthian Covers, the sample booklet contains the seven modern cover colors to match the long established B. P. F. book papers made by the firm in a similar number of hues. The sampler of the Corinthian Covers that are the first cover papers to be made by the firm, and added to the stock of the Satterthwaite-Cobaugh Company last month, is matched by another booklet of the samples of the B. P. F. papers, being sent with the covers. Specimen printed designs are included among the sampler sheets and covers showing the effectiveness of the line.

Show New Standard Paper Mfg. Bonds

Two Philadelphia distributors of the Standard Paper Manufacturing Company, manufacturers of blotters and printing papers, Richmond, Va., are now stocking the new colors of two text bonds made by the mills and recently introduced to the trade and shown at the Direct Mail Advertising Convention. They are the Thomas W. Price Company and Satterthwaite-Cobaugh Company. The new bonds are in rose and golden rod and are one side coated. With the two new shades there now are five colors and white being stocked by the Quaker City dealers.

Frank M. Berry In Satterthwaite Cobaugh Co.

Frank M. Berry, who is well known to the Philadelphia trade as the former associate of the Dill & Collins Company and recently was attached to Raymond & McNutt, is now connected with the Satterthwaite-Cobaugh Company in the firm. He is engaged in promotion and advertising with the company.

Rochester Paper Co., Blotter Distributors

Riegel & Co., Inc., 140 N. 6th street, is carrying the full line of blotters made by the Rochester Paper Company, Rochester, Mich., the latest addition to the line of printing papers stocked by that concern. The Riegel Company has taken over the exclusive Quaker City distribution of these blotters. They are marketed under the Indian Blotters and are produced in a full range of colors of modern shades adapted for advertising purposes or for stationery requirements.

A. M. Collins Mfg. Co. Adds Cover

Two unique and original papers in the cover grades made by the A. M. Collins Manufacturing Company, 15th and Walnut streets, and mills at 2nd and Girard avenue, are the Old Spanish and Javanese designs, of modern colorings and effectiveness. These are supplemented by the latest of products in the Laidtone Duplex Letter papers with the coated and dull finish sides which have been added to the Laidtone group of products made under the Collins mark. The local manufacturers have compiled effective demonstration folders of the Laidtone papers which are being sent to consumers and the trade in new forms. There are five grades in the Laidtone marks, including the new Laidtone Letter Duplex, with the Laidtone Translucent, Laidtone Blanks, Laidtone Book, Laidtone Covers and Laidtone Letters. They are of brilliant colors and can be worked into effective illustrations that are not possible in ordinary papers and in duplex tones, as well as straight colors.

Mail Campaign On Dill & Collins New Product

A direct mail advertising campaign among the consumers as well as sales promotion work among the distributors is being adapted by the Dill & Collins Company, in the introduction of the newest of coated papers perfected in the local mills. The new line is the PrintfleX which is made in various sizes and weights. It is a high quality and economical folding coated paper that is being promoted under the advertising manager, W. R. Kortkamp, through direct mail samplers and other ad means.

General Electric Occupies New Plant

The General Electric Company, which manufactures paper making units, in general use by the paper mills and converting industries, is now occupying its newly erected mammoth plant at 69th street and Elmwood avenue, devoted to the Switchgear division. The factory occupies one million square feet of floor space for manufacturing purposes and employs more than 3,000 men and women who are employed in production of switch gear control electric power and distribution equipment.

New Herringbone Speed Reducers

The Palmer-Bee Company, Detroit, Mich., has just placed on the market an entirely new line of Herringbone Speed Reducers. This series has been added in order to meet the ever-increasing demand for still stronger, more modern and efficient enclosed gear reduction units.

Anti-friction bearings are used throughout; ball bearings on the high speed, Hyatts on the intermediate and Timkens on the slow speed shaft. Gears are continuous-tooth herringbone, with silent Kysor tooth form, producing more rolling and less sliding action than heretofore has been obtainable. The slow speed gears in the double and triple series are divided in the center, permitting a more symmetrical arrangement of the gearing and a uniform load on each bearing.

Following the universal practice of the automotive industry in using the three-point method of mounting motors in chassis, the Palmer-Bee Company has adopted this method in bolting the reducer to the sub-base. Alignment of the various elements of the drive are thus facilitated.

No outboard bearings are required for overhung loads up to the maximum rated capacity of the reducer. This feature is one of no little importance when the additional expense and inconvenience of including them in certain drive layouts is considered.

The efficiency of the Single Series Reducers is approximately 99 per cent, and of the Double Series about 97 per cent. An illustrated folder describing the salient features can be obtained for the asking from the manufacturers.

Leaves Harrisville Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

HARRISVILLE, N. Y., November 10, 1928.—Charles Willard, superintendent of the finishing department of the Harrisville Paper Company, has resigned and removed with his family to Watertown. Mr. Willard has been in charge of the finishing department at the local mill since the plant reopened following reorganization. His successor at the Harrisville Mill is J. La Pine, who was formerly connected with the Black River Mill of the St. Regis Paper Company. Mr. La Pine has already taken charge.

When Douglas held Lincoln's Hat.

It was a gracious act when Douglas reached over and held Lincoln's hat while he was delivering his first inaugural speech in Washington in 1861.

It was a day when History was in the making.

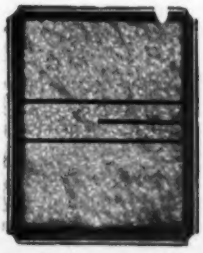
Three years before this time history was also in the making in the paper industry, when Asa Shuler and J. W. Benninghofen got together and formed a partnership for the manufacture of paper making felts.

That partnership still exists among the descendants of these two men. And they are making better felts than did those pioneers in 1858. It would be strange indeed if they did not, with these three generations of experience to help them.

For it is this experience that dictates the entire process of making these felts which combine strength with great water removing quaiities; that save in steam and coal costs; that wear longer and produce better paper with less down time for washing; that make money for the wise manufacturer who uses them.

But the test of a Hamilton Felt is in your mill on your machines. For purposes of comparison take your hardest one—put on it a Hamilton Felt, and give it the most grueling test of use and performance you think a felt ought to have. Don't spare it. You'll come back and want these better felts on all your equipment.

Ask the Hamilton Felt man, who is a practical paper maker as well as a felt expert the next time he calls. Tell him your problem. He'll have a felt for you that will meet it exactly. Most likely he calls on you regularly, or you can write to us direct.



Hamilton Felts are marked by two blue lines full width of the felt and by one shorter blue line midway between them.

Shuler & Benninghofen, Hamilton, Ohio

The Miami Woolen Mills

Established 1858

Hamilton Felts

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Fitchburg, Mass.—Crocker, Burbank & Co., Westminster street, has awarded a general contract to Wiley & Foss, Central street, for alterations and improvements in its Mills Nos. 7 and 8, including construction of a new one-story unit for general storage and distributing service, and railroad trestle, entire project reported to cost close to $45,000. Work will be placed in progress at once.

Parkersburg, W. Va.—The Parkersburg Corrugated Box Company, Depot street, is reported to have plans maturing for extensions and improvements in its plant, including new one-story addition, 50 x 290 feet. The program is expected to double present plant capacity, and is estimated to cost in excess of $85,000, with equipment.

Williamsport, Pa.—The United States Sand Paper Company, Williamsport, has concluded negotiations for purchase of two other abrasive paper manufacturing interests, the Federal Abrasive Works, Inc., Westfield, Mass., and the Standard Abrasive Company, Garfield, N. J. The acquiring company has arranged for organization of a new subsidiary, to be known as the Standard Abrasive Company, which will take over and consolidate the two purchased concerns. New organization is planning a general expansion program for enlarged output. It is understood that production in the future will be concentrated at a single main plant. Frank F. Winters is president of the purchasing company.

Los Angeles, Cal.—The Pioneer Paper Company, 5500 South Alameda street, has awarded a general contract to V. P. Gilbert, Citizens' National Bank Building, for improvements and alterations in its storage and distributing warehouse at 387 Hewitt street, and will proceed with work at once. Estimated cost has not been announced.

Monroe, Mich.—The Consolidated Paper Company has completed the construction of a new unit on adjoining site, previously noted in these columns, and will place in service early in December for a new paper bag manufacturing department. The installation of machinery and equipment is now in progress. The extension will represent an investment of close to $500,000, and will require extensive additions to the working force. A. H. Lockwood is superintendent.

Port Angeles, Wash.—The Fibreboard Products Company has approved plans for extensions in storage and distributing facilities, to include construction of a new dock, extending 800 feet from mill to deep water, with wharf frontage of about 280 feet. A one-story warehouse will be built in connection with dock structure, to be 30 x 150 feet. Work will be placed under way at early date. Estimated cost has not been announced.

Wellsburg, W. Va.—The Pillsbury Flour Mills Company, Minneapolis, Minn., is concluding negotiations for the purchase of the plant and business of the Harvey Paper Company, Wellsburg, specializing in the production of heavy paper stocks for bags and sacks. The purchasing company is planning to carry out an expansion and betterment program at the mill, which will be operated as a subsidiary in the future, to include a new unit for the manufacture of bags for packing flour, cereals, etc., reported to cost close to $200,000, with equipment.

Pittsburgh, Pa.—The Whitaker Paper Company, 101 Ninth street, is completing plans and will take bids within a few days for its proposed new plant on site recently acquired on Beaver avenue, to be one-story, reinforced concrete, reported to cost about $200,000, with mechanical equipment. Unit will be used for storage and distributing service, and it is understood that company will remove from present location, concentrating operations at new building. R. Maurice Trimble, Commonwealth Annex, is architect, in charge. B. M. Johnson is vice-president.

Trenton, N. J.—The Jersey Tag Company, recently formed by Donald R. Bryant, 501 Trenton Trust Building, and associates, with capital of $50,000, plans operation of local plant for the manufacture of paper tags, bags, envelopes and kindred products. John Milward, Trenton, and Charles R. Lucas, Morrisville, Pa., are interested in new company.

Mobile, Ala.—The International Paper Company, New York, has begun the construction of its proposed new kraft paper mill on site recently selected at Magazine Point. It will consist of a group of buildings as follows, for which plans have now been approved: main paper mill, one-story, 100 x 780 feet; one-story machine shop, 58 x 120 feet; general supply house, 50 x 140 feet; one-story wet room, 100 x 121 feet; evaporating room, 97 x 100 feet; one-story recovery room, 113 x 200 feet; barking drum, 40 x 100 feet; salt cake storage building, 45 x 120 feet; lime storage building, 45 x 90 feet; slate room, 30 x 45 feet; settling and filter department, 65 x 120 feet; lime recovery unit, 20 x 120 feet; storage department, 69 x 88 feet. Different structures will be of brick and concrete type; plant will be electrically operated, and it is understood that central station service will be secured for this purpose, with construction of power substation at the plant site. The entire project is reported to cost in excess of $1,750,000, with equipment. Plant is scheduled to be ready for service during the coming year.

Chicago, Ill.—The Vulca-Fibre Corporation, 155 North Clark street, recently organized with capital of $70,000, plans the operation of a local plant for the manufacture of fiber products. The incorporators are Samuel S. Parks and Joseph Kohout, Jr.

Chicago, Ill.—Marshall Field Co., 3025 West 47th street, have leased a one-story building at 47th and Whipple streets, for their paper bag department. Factory totals about 72,500 square feet of floor space and will be given over exclusively to this branch of output; it is located in vicinity of present factory of company in Kenwood manufacturing district.

Baltimore, Md.—Bartgis Brothers Company, manufacturer of paper board products, folding boxes, containers, etc., has leased its present factory at Hamburg and Bush streets, comprising a one-story structure of about 23,000 square feet of floor space, to George L. Seldner & Co., 611 East Fayette street, who will use it for another branch of manufacture, taking possession about

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Sulphite Digesters
Experimental Digesters
Incinerators
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Cylindrical Rotaries
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Relief Separators
Causticizing Tanks
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Diffuser Tanks
Refiners
Bleach Mixers
Blow Pipes
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MANITOWOC

Manitowoc, Wisconsin

January 1. At that time the Bartgis company will remove its plant to its new mill at Ilchester, Md., comprising the former textile mill of Thistle Cotton Mills, Inc., now being remodeled for that purpose. Considerable increased capacity will be arranged at the new location, with installation of new machinery. Frederick L. Smith, 21 East 40th street, New York, pulp and paper mill engineer, is in charge of the Ilchester project.

Niagara Falls, N. Y.—Fire, November 3, damaged a portion of stock at plant of the International Paper Company, Buffalo avenue. An official estimate of loss has not been announced, but is stated as slight.

Los Angeles, Cal.—The Buttress Manufacturing Company, 507 Shatto place, has taken out a permit for the erection of a new plant at 2201-15 South San Pedro street, for wall board production and distribution, to be one-story, 116 x 165 feet, estimated to cost about $65,000, with equipment. The Moran Company, 740 South Broadway, is architect, and will be in charge of construction.

New Companies, Etc.

New York, N. Y.—The Withrow Paper Corporation has been incorporated with a capital of $10,000 to manufacture and deal in paper products of various kinds. The incorporators are Richard Graham and William J. Rapp, 64 Wall street. Last noted is company representative.

New York, N. Y.—The Tidewater Paper Mills Company, New York, has filed notice of company dissolution under state laws.

North Andover, Mass.—M. Rudolf Jahr, Inc., has been incorporated with a capital of 250 shares of stock, no par value, to deal in paper products of various kinds. Fritz Ostherr, 215 Haverhill street, Lawrence, Mass., is president and treasurer, and will act as company representative.

Bloomfield, N. J.—The Transparent Tube Company has been organized by Walter W. Reid, Jr., and Ray W. Krout, Bloomfield avenue and Grove street, to operate a local works for paper converting, production of paper tubing, etc.

Grand Rapids, Mich.—The Quimby-Kain Paper Company has filed notice of increase in capital from $50,000 to $100,000, for expansion.

New York, N. Y.—The S. A. Ryan Paper Company has filed notice of company dissolution under state laws.

Lawrence, Mass.—The South Lawrence Wall Paper Company, 571 Common street, has filed notice of organization to deal in paper goods. Joseph Dane heads the company.

Detroit, Mich.—The Standard Paper Box Company has filed notice of increase in capital to $20,000, for general expansion.

Hoquiam, Wash.—The Grays Harbor Pulp and Paper Company, an interest of the Hammermill Paper Company, Erie, Pa., and Crown-Zellerbach companies, San Francisco, Cal., has secured permission to issue and sell 80,000 shares of stock, no par value, proceeds to be used for general operations. The company recently began operations in a new local pulp mill.

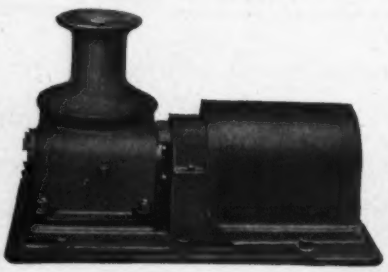
Sutherland Paper Co.'s Sales Agencies

KALAMAZOO, Mich., November 12, 1928.—The Sutherland Paper Company, with plants and general offices in Kalamazoo, now has seven general sales agencies, located in as many parts of this country. W. W. Hixon is in charge of the New York City, New England and eastern office, located in the metropolis. A. C. Olson covers the Central West from the Chicago office. R. A. Farwell is in charge of the Detroit office, while Lorraine F. Jones, Jr., looks after the Mississippi Valley from St. Louis. Three other general sales agencies are: E. W. Lee, Indianapolis; R. H. Hughes, Dallas, and John L. Yocum, Seattle.

"The Carton Maker" is the Sutherland house organ. It is published monthly under the direction of M. Dale Ogden, advertising manager, and one of the most creditable journals of its kind in Kalamazoo. It is built to a well conceived plan.

Weller Capstan Car Pullers

The Weller Manufacturing Company has built car pullers for years, including a complete line of the horizontal capstan and drum types. To round out its line it has designed two sizes of the Upright Capstan Type which are electrically operated. The new type of Weller Capstan Type Car Puller is a compact, self-contained unit, occupying very little space. It is easily operated and is practically fool proof. It will pull in any direction or at any angle. It operates at the touch of a button. The consumption of power and expense of operating is very little.



The C-1 will develop full strength of 1¼-inch manila rope and will pull from 1 to 3 cars. The C-2 will develop full strength of 1½-inch manila rope and will pull from 3 to 6 cars.

A car puller installed does away with waiting for the switch engine and crew, also saves the time of the regular force who are usually compelled to stop their work and move the cars with pinch bars. It is also adapted for other purposes, such as moving cars in and out of kilns, moving heavy trucks and pulling materials around the yard or plant.

Descriptive circular and prices will be sent by addressing Weller Manufacturing Company, 1820 N. Kostner avenue, Chicago.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 14, 1928.—The Government Printing Office has received the following bids for 1,600 pounds of 24x36 red rope paper: Reese & Reese, at 10.85 cents per pound; R. P. Andrews Paper Company, 12.43 and 10.8 cents; Mathers-Lamm Paper Company, 10.7 cents; T. A. Cantwell & Company, 11.5 cents; and Virginia Paper Company, 10.87 cents.

Also for 855 pounds of 34x50 white rope drumhead manila paper: Virginia Paper Company, 18.87 cents; Mathers-Lamm Paper Company, 18.45 cents; Old Dominion Paper Company, 18.74 cents; and Whitaker Paper Company, 17.9 cents.

The Printing Office will receive bids on November 16 for 1,167 pounds (13,889 sheets) of 24½x32—84 blue chemical wood mimeograph paper.

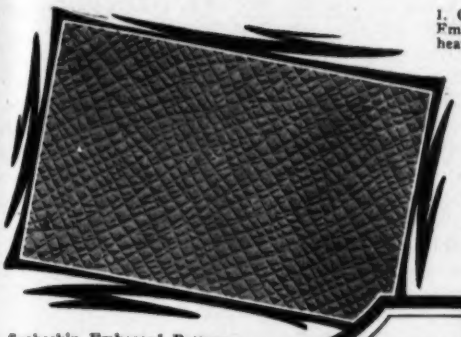
The Government Printing Office has received the following bids for 40,000 pounds of wood manila tag board in 22-inch rolls: Whitaker Paper Company, at 5.5 cents per pound; Old Dominion Paper Company, 5.99 cents; R. P. Andrews Paper Company, 4.85 cents; Reese & Reese, Inc., 4.125 cents; and Mathers-Lamm Paper Company, 4.5 cents.

For 5,000 sheets of 22x28 red railroad board: Virginia Paper Company, $32.49 per M sheets; Whitaker Paper Company, $32.50; R. P. Andrews Paper oCmpany, $32.45; Barton, Duer & Koch Paper Company, $32.40; Holyoke Card & Paper Company, $32.50; Mathers-Lamm Paper Company, $34.00; and Henry Fuchs & Son, $35.00 less 3 per cent.

Standard Wall Paper Co. Dissolves

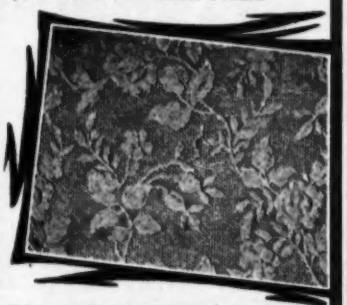
[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., November 12, 1928.—Following the merger of the Hudson Falls plant with several other firms as the United Wall Paper Factories, Inc., the Standard Wall Paper Company has filed with the secretary of state at Albany a certificate of voluntary dissolution. The Hudson Falls plant is now known as the Standard Division of the United Wall Paper Factories of which Winfield A. Huppuch, of this place, is president.

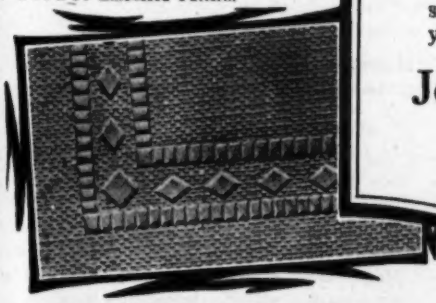


2. Snakeskin Embossed Pattern.

3. Spanish Leather Embossed Pattern.

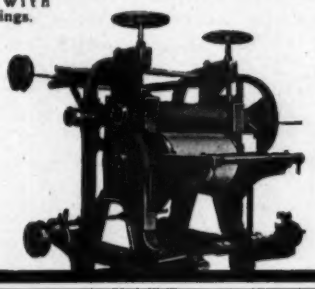


4. Flower Embossed Pattern.



5. Cambric Embossed Pattern for Napkins.

1. Open Front Type Waldron Embosser equipped with heavy duty roller bearings.



Waldron Embossing Provides Effects That Stimulate Your Sales

When you consider the importance and sales value of beauty in processed papers, you can then fully realize the absolute necessity of insuring better appearance and "feel" of your product. As these elements are improved in a product, the greater becomes the demand for it.

The large variety of beautiful embossed effects and the superior quality of actual engraving now being secured, is in large part the result of the correctly made paper rolls and correctly proportioned machines, that are designed and built by Waldron.

The benefit of the knowledge gained from a century of experience and possessed only by Waldron embossing specialists is surely worth securing. Consult us regarding possibilities in your plant. There's no obligation.

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New Address
519 American Bank Bldg.
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WRITE for your copy of twenty-page illustrated book explaining principles and modern methods of embossing.

WALDRON

Paper Converting Machinery

Trade Mark Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

LO-LY—No. 269,939. Edwin Broun, New York City. For blotters.

E-Z-WAY—No. 270,279. Edward J. Carter, Los Angeles, Cal. For masking and stencil papers used in painting.

ART INLAID—No. 270,301. Old Colony Envelope Company, Westfield, Mass. For mailing envelopes and greeting and announcement cards.

PRAIRIE—No. 270,694. Harry M. Elish, New York City. For print paper, bond paper, onionskin paper, clothlined paper, gummed paper, book paper.

ACCURATE BOND—No. 271,864. Regent Card and Paper Company, Inc., New York City. For bond paper and ledger paper.

LINDY—No. 271,565. Stamatis Polychronopoulos, New York City. For perfumed confetti.

A. P. W.—No. 272,193. Albany Perforated Wrapping Paper Company, Albany, N. Y. For toilet paper, tissue paper, crepe paper, paper towels.

HIPPO KRAFT—No. 271,235. The Diem & Wing Paper Company, Cincinnati, Ohio. For wrapping paper and tissue paper.

REYNOCO—No. 271,361. The Reynolds & Reynolds Company, Dayton, Ohio. For blank slips, ledger leaves, loose-leaf blanks, envelopes, order blanks, writing and printing paper.

KLAMATH—No. 264,499. Mutual Stores, Inc., Oakland, Cal. For toilet paper and paper napkins.

THETA—No. 267,519. The Theta Dry Stencil Corporation, New York City. For dry stencils.

UNISET—No. 271,360. The Reynolds & Reynolds Company, Dayton, Ohio. For manifold forms.

PRINTYPE—No. 271,380. Fort Pitt Typewriter Company, Pittsburgh, Pa. For stencil paper for use in duplicating machines.

SEALCONE—No. 270,305. Sealed Containers Corporation, New York City. For paper bottles for milk, cream, ice cream, etc.

Mohawk Papermakers Sue Henry Ford

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., November 12, 1928.—The Court of Appeals is asked to determine judgment of the trial court of Saratoga County in the action of the Mohawk Papermakers and others against Henry Ford & Son for damages in raising the height of the dam on the Ford property at Green Island. The paper concern obtained a judgment of $5,210 and the Ford Company was stopped from maintaining flashboards on the crest of the dam which raised the level of the water two feet. The Appellate Division affirmed the judgment but increased the amount by $925.

The plaintiffs obtained a permanent injunction which prevented raising the level of the water behind the dam. Plaintiffs and others have a dam at Waterford, Saratoga County, by which water power is developed for operating certain mills and factories. The raising of the federal dam at Green Island caused the complaining firms to lose two feet of the head of the water impounded, it was charged.

The Federal dam replaced the old state dam and was built by the United States Government. The dam when built provided for flashboards should their use be necessary. Henry Ford and Son filed with the federal power commission an application for a license for a hydro-electric power plant at the westerly end of the dam at Green Island. The power commission subsequently gave its license and the plant was built in 1923, being operated by water power.

In 1924 a request for authority to install flashboards to raise the height of the dam was made by the Ford company. These were erected on June 16, 1925. The Ford Company set up defenses that in putting up the flashboards it acted for the United States Government and under the regulations of government officials.

Charles E. Nichols, of Whalen, Murphy, McNamee and Crebit, this city, argued that the plaintiffs were not entitled to the extra allowance. He cited that if the plaintiffs should contend that the allowance belongs to all three of the plaintiffs then two of them would be benefiting through the good fortune of the third in not having been damaged. He argued that the judgment appealed from should be dismissed and the complaint dismissed. Thomas O'Connor, of Waterford, argued for the corporations affected by the installation of the flashboards.

Paperboard Industries Association to Meet

The next meeting of the Association, which is the Annual Meeting, will be held at the Waldorf-Astoria Hotel, New York City, Wednesday, November 21 and Thursday, November 22, 1928.

This is the Annual Meeting at which the President, the Vice-Presidents and the Executive Committee will be elected for the ensuing year. Plans will also be outlined at this meeting covering work to be undertaken during the coming twelve months.

SCHEDULE OF MEETINGS

On Wednesday, November 21, there will be a meeting of the Folding Box Group in the morning and of the Paperboard Group in the afternoon. The Container Group meeting will be held on Thursday morning, November 22, the General Meeting of the three Groups in joint Session convening at 2:00 P.M. afternoon.

The schedule of meetings is as follows:

Meetings in "The Roof Graden," Waldorf-Astoria Hotel

WEDNESDAY, NOVEMBER 21, 1928:

10:00 A.M.-12:30 P.M.—Meeting of *Folding Box Group*

2:00 P.M.- 4:30 P.M.—Meeting of Paperboard Group

THURSDAY, NOVEMBER 22, 1928:

10:00 A.M.-12:30 P.M.—Meeting of Container Group

1:00 P.M.-2:30 P.M.—Meeting of Container Group

Garden"

2:00 P.M.- 4:30 P.M.—Meeting of the 3 Groups in joint Session

COMMITTEE MEETINGS—TUESDAY, NOVEMBER 20

Notices will be mailed calling meetings of Standing Committees and Executive Committee, at the Waldorf-Astoria, as follows:

Meetings of Standing Committees—Tuesday A.M., November 20.

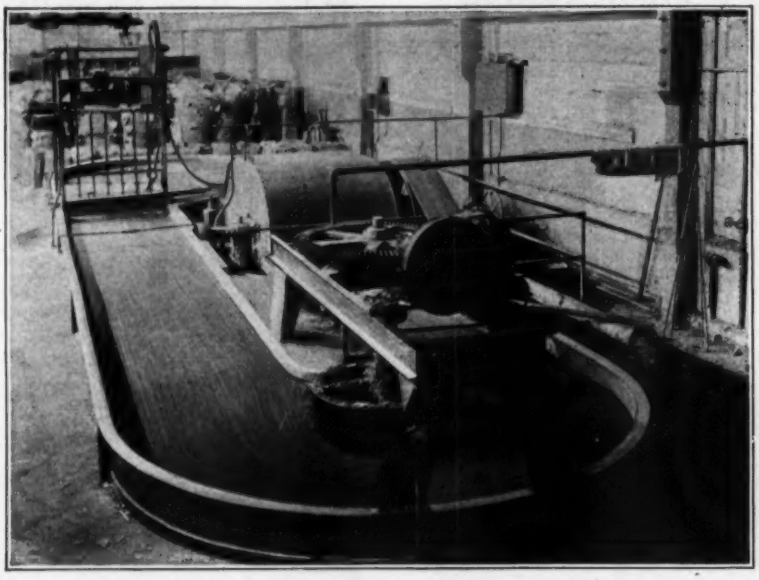
Meeting of Executive Committee—1:00 P.M., Tuesday, November 20.

L. C. Holliday Made Asst. Superintendent

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., November 12, 1928.—A mill hand who entered the employ of the National Products Company here nine years ago was this week appointed assistant superintendent with virtual charge of the entire plant. He is Leon C. Holliday, of this place. As assistant to Ernest Eddy, superintendent, he will assume most of the work of managing the mill in view of the fact that Mr. Eddy's work will keep him on the road most of the time. Announcement of Mr. Holliday's promotion from office manager to assistant superintendent was made by company officials who held an important meeting here this week. Although no definite news was issued it has transpired that the officials are contemplating some changes in the plant of a reconstruction nature with the view of enlarging the plant or a change in the present methods used in manufacture.

The National Paper Products Mill is one of the largest and most important in this village and has been operating at capacity for some time. About six months ago Mr. Eddy was sent to the California plant operated by the firm and during his absence the local plant was under the direction of Leon Holliday. Mr. Holliday entered the employ of the firm as a mill hand a few years ago and his ready grasp of all details connected with the business earned him the promotion which is a deserving one.



BOARD MILLS—Lower Your Production Costs with Valley Breaker Beaters

—and lower your costs on so many items of production that Valley Breaker Beaters will earn for you their cost many times over—while at the same time increasing your production and keeping your stock uniform.

Valley Breaker Beaters develop marked improvement in the stock and permit constant supervision of raw materials at one source. Thoroughly separating foreign materials from the stock, Valley Breaker Beaters are quick mixers and rapid disintegrators. They reduce steam and power consumption—those factors that so definitely affect production costs.

Further savings are made because there are few replacements of fly bars, bed plates, jordan plug and fillings.

The perforated revolving extractor (shown in the foreground in the above installation view) insures quantity production, as it permits self-cleaning of the extractor during the entire period of beating. It maintains the correct rate of stock discharge—insuring clean and free stock in large amounts. That's why the beater illustrated above is producing 100 tons of board stock per day.

Let us tell you more about Valley Breaker Beaters—Complete details on request. Write today.

VALLEY Equipment Includes

Beaters: Holland and Niagara
Deckers: Single and Double
Agitator Equipment
Screens: Flat and Rotary
Pumps: Centrifugal and Stuff
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Yoith Stock Inlet
Laboratory Equipment
Stock Valves: 2 and 3 Way
Stock Consistency Regulators
Beater Rolls and Fillings
Digester Fittings of all Kinds

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: 350 Madison Avenue
Western Manufacturing & Sales Division: Smith & Valley Iron Works Company Portland, Oregon

New York Trade Jottings

L. M. Alexander and Mrs. Alexander of Ft. Edwards, Wis., are in New York for several days. Mr. Alexander is president of the Nekoosa--Edwards Paper Company.

* * *

Anders Hellstrom, managing director of Papryrus Paper Mills, Ltd. of Molndal, Sweden, was a visitor to hte TAPPI office this week.

* * *

Major O. M. Porter, secretary of the American Paper and Pulp Association has returned to his desk after an illness of two weeks.

* * *

Maurice Hoopes, president of the Finch-Pruyn & Co. of Glens Falls, New York, was a visitor in New York City last week.

* * *

The National Industrial Conference Board held a meeting at its offices in New York City on Friday, November 9, to determine the most suitable way of presenting the various types of statistical data issued by the different industries. The News Print industry was represented by R. S. Kellogg, secretary of the News Print Service Bureau, and the American Paper and Pulp Associaition by J. A. Kavanagh, its statistician.

* * *

Two interesting booklets covering the subjects of Pipe and Tank Engineering are being distributed by the Little River Redwood Company, Fnancial Center Building, San Francisco, Cal. Valuable information is contained showing how liquid handling equipment made of wood should be designed and erected. Considerable engineering data relating to hydraulics is included in the work.

* * *

M. H. Lund, the new Commercial Attache to Oslo, will sail for his new post from New York on November 28. He will be in New York City for a week before sailing, visiting the paper trade. Mr. Lund has just completed a trip to various parts of the country during which time he visited most of the paper manufacturing centers. He is leaving Washington on November 17 and will bo to Willmington, Philadelphia and then to New York where he will remain until he sails.

* * *

Dr. E. O. Merchant will lead a round table discussion at the first annual meeting of the Harvard Economic Society at Boston, Saturday, November 17. The general subject will be the effect of past and present money conditions upon plant capacity and competitive conditions in various industries. R. S. Kellogg secretary of the News Print Service Bureau and J. C. Kavanagh, statistician of the American Papar and Pulp Association will attend the meeting and will present data for discussion.

* * *

Frank Greenwald and David J. Light, holding the respective offices of treasurer and secretary of the National Adhesives Corporation with executive offices located at 820 Greenwich street, New York travelled by airplane from Cleveland to New York in three and one half hours on Election Day to cast their ballots. Messrs. Greenwald and Light had been on an inspection tour of the company's plants and sales offices in the principal cities in the United States and Canada and had planned to be back in New York on the sixth of November. However, due to unforeseen complications they were not able to adhere to their schedule and had to charter a plane to get them to Gotham before the polls closed.

* * *

M. A. Williamson, Publishing Director and Business Manager, of Food Industries, will address the New York Division of the Salesmen's Association of the Paper Industry at its luncheon on Monday, November 19. His subject will be: "The Market for Pulp and Paper Products in the Food Industries." Food Industries is a new publication started in October, 1928, by the McGraw-Hill Company. As a service to the paper companies advertising in this magazine, the McGraw-Hill Company is making a survey of the market for pulp and paper products in the various food industries and Mr. Williamson's talk will give some of the results of this survey. His remarks should be of real value to salesmen of many grades, and indicate possible channels for new business.

A. P. W. Paper Co. Expanding

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., November 12, 1928.—The tissue plant of the A. P. W. Paper Company started this week to operate on a 24 hour daily schedule necessitated by a large increase in the firm's business. Business, potential and actual, warranted day and night operations of the tissue manufacturing plant, according to officials. It was also announced that a permit had been granted and work started on a new warehouse in Broadway which will be erected at a cost of approximately $90,000.

The warehouse now under course of construction will be of concrete and steel materials and will be used in storing semi-finished paper. Earlier in the summer a $60,000 warehouse for storing pulp was completed near the main plant and this building is now in use. In the meantime work on the company's new $1,250,000 plan, a duplicate of present units, is progressing rapidly and officials said that it would probably be completed late in December. It was stated that the new unit would allow an increase of about 75 per cent in the output of the plant. Over 100 new workers are to be added to the firm's working force in the near future.

D. G. Kibbey, traffic manager of the company, is working on a charter that calls for the arrival next year of sixteen ocean cargoes of pulp. Four of these will be sulphite and the others raw pulp from the company's plant in Nova Scotia. Previously six or seven boatloads has been the maximum arriving here in one season.

Mr. Kibbey recently appeared before the Interstate Commerce Commission to ask for equitable freight rates so that his company could utilize a large and growing nearby market for its surplus ground wood pulp. He said that the company plans to bring over 30,000 tons of pulp to its plant in this city next year and that plans are now under way for taking care of the increased shipments. According to Mr. Kibbey, the mills at Sheet Harbor, Nova Scotia, are producing more than 50,000 tons annually and the surplus is now being distributed through the ports of Boston, New York, Philadelphia, Baltimore, Newark and Newport News. Sales from Albany, Mr. Kibbey said, are limited to a certain extent owing to the high freight rates and he believes that the market might be considerably extended if just and reasonable freight rates were placed in effect in Albany.

The Steamship Laila from Nova Scotia this week unloaded 1,600 tons of pulp at the company's terminal and Mr. Kibbey said that if the Hudson River remains open to navigation three more cargoes will be shipped before the cold weather sets in.

District of Columbia Paper Mfg. Co.

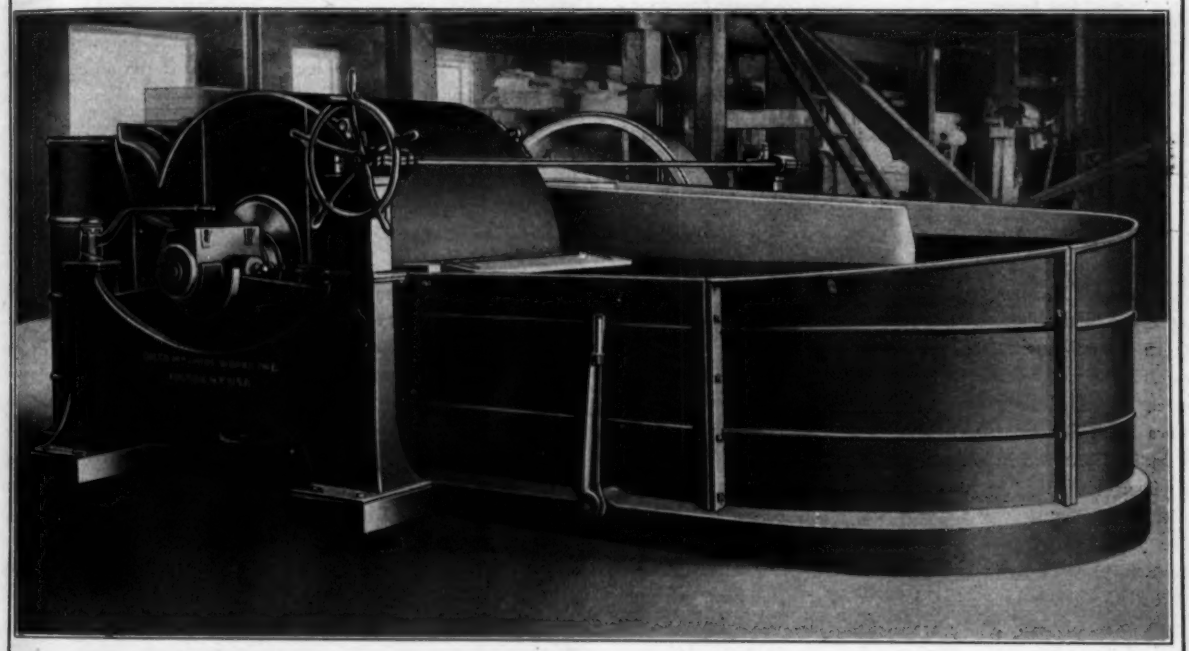
In the article in the PAPER TRADE Journal of October 25, 1928, describing the Philadelphia Direct Mail Advertising Convention, the word "Manufacturing" was inadvertently left out of the name of the District of Columbia Paper Manufacturing Company. The item regarding this company also gave the impression that it advertised in connection with the Whiting-Patterson Company. The District of Columbia Paper Manufacturing Company had a booth of its own at the Convention which attracted a great deal of favorable comment.

"Your Paper is Made in your Beaters"

NEW TYPE

HIGH DENSITY

BETTER CIRCULATING



THE PROBLEM is "how to beat *more* stock into *better* quality with *less* cost for labor and power."

THE ANSWER is "the Dilts New Type, High Density, Better Circulating Beater, built with high tub and with the roll located toward the rear end."

We can rebuild your beaters to our New TYPE design.

Dilts

MACHINE WORKS, Inc. FULTON, N.Y.

EXPORT OFFICE - 15 PARK ROW - NEW YORK CITY

Some 1928 orders

Ohio Boxboard Co. 8
International Paper Co. . 12
Gulf States Paper Corp. 6
Oswego Falls Corp. 4
St. Regis Paper Co. .. 8
Mobile Paper Mills 2
Consolidated Paper Co.. 6
And many others.

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PAPER TRADE JOURNAL
ESTABLISHED 1872

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Editor Cost Section

Reginald Trautschold, M. E.
Power Engineering Consultant

Member A. B. C. Audit Bureau of Circulations

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ALASKA'S PAPER RESOURCES

THE PAPER TRADE JOURNAL has in the past expressed, editorially, opinions regarding the paper making resources of Alaska. These have not coincided altogether with the enthusiastic views expressed in the daily papers or in popular periodicals, and the PAPER TRADE JOURNAL has been criticised in some instances, at least, for not accepting the general view. In reference to an article in the current issue, Mr. R. S. Kellogg, secretary of the News Print Service Bureau, has sent a letter to the editor of *World's Work* which so intelligently considers this subject that the liberty is taken of quoting rather fully from this communication.

"The article in your November issue, 'Alaska—Uncle Sam's Coming Paper Factory,' by my old friend W. B. Greeley has been read with much interest, and in view of the statistical quotations from some of the News Print Service Bureau reports, I take it you will not object to further comments thereon.

"Frankly speaking, during the past ten years a good many Alaska chickens have been counted as hatched, when, as a matter of fact, the period of incubation has scarcely begun. About 1920 the Forest Service made some supposed timber sales in Alaska for the purpose of paper manufacturing, and these sales were very widely press-agented as indicating immediate large-scale production of news print paper in that territory. The sales, however, were made to promoters instead of practical paper manufacturers. Part of them were subsequently cancelled and the only material result was the building on a shoestring of one very small groundwood pulp mill, which operated for about a year and has since been unable to sell its product, so that the investment therein looks like a total loss. Nevertheless, because of the publicity given to these sales, the general public is very largely of the belief that paper is being made in Alaska today. The sub-heading in your November article, 'The Part Her News Print Plays in the Paper Age,' is well fitted to continue this misconception on the part of hasty readers.

"The facts are that in April, 1927, the Forest Service made two large timber sales in Alaska, one to a firm of well-known and capable manufacturers on the West Coast and another to the owner of a newspaper without any paper manufacturing experience. The conditions of these sales require the building of two paper mills of at least 200 tons daily capacity each within five years from date, and the purchasers were given the privilege of two years' examination of timber and water power potentialities before deciding upon mill locations. Field parties of foresters and engineers employed by these purchasers were at work in Alaska last summer and again this summer. From my experience and knowledge of the paper business and of the conditions in Alaska, I know that before the holders of these contracts can come to a conclusion as to whether or not it will be advisable to build paper mills, they will have to spend in the neighborhood of $50,000 a year for several years in examining the timber and water-powers, so that, in all probability, they will have to ask for an extension of time to complete their studies. The terms of the timber sales require only a relatively small cash payment, and the sales may be thrown up without great loss if the purchasers are not satisfied with the commercial possibilities offered.

"Whether the next few years will see paper mills built in Alaska is therefore beyond prediction at this time The most that can be said is that the present one is the first thorough study of the paper-making possibilities of the territory made by practical paper manufacturers of sufficient resources to tackle the job if they find it worth while.

"There are some general considerations in connection with Col. Greeley's article. The assumption is made that Alaska can economically produce 1,000,000 tons of news print paper yearly and forever and also that a total cost of 400,000 hp. of potential water power exists in the southeastern section of the territory which contains pulp timber. Suppose we accept both of these figures as correct, even though they are very large assumptions. To turn out regularly a total of 1,000,000 tons of newsprint paper a year will, at the least calculation, require paper mills of an aggregate of 4,000 tons daily capacity, because over a long period of time, operating experience shows that practical production runs just about 90 per cent of capacity, making allowance for breakdowns, repairs, improvements, and what in the legal parlance are termed 'acts of God.' The minimum power requirement for a modern news print paper mill is 100 hp. per ton of daily capacity, so that 4,000 tons daily capacity would require a minimum of 400,000 hp. day after day, year in and year out. This, you see, is the total estimated potential horse power of the region in question. It is hardly necessary, I think, to mention the improbability of 100 per cent development and utilization in a country where, because of topography and small separate powers, difficult transmission lines will have to be constructed for considerable distances.

"The article also says that a 500-ton daily capacity news print mill will require an investment of not less than $10,000,000. Such a complete modern mill, with all that goes with it, including a fair allowance for working capital, will cost from $20,000,000 to $25,000,000, and there is ample recent experience to corroborate these figures both in British Columbia and eastern Canada.

"Figures attributed to this office are quoted to show the increase in news print consumption in the United States up to 1926—and they are correct. The significant thing, however, is that there has been almost no increase in news print consumption since 1926, and on a per capita basis, consumption in 1926, 1927 and 1928 is stationary at 58 lbs. For the encouragement of the manufacturers of news print paper, I should like very much to predict large in-

creases in the near future, but I can find no facts upon which to base such prophecies. The news print industry of North America is now operating at only 80 per cent of installed capacity. If it is able to reach 85 per cent in 1929, there will have to be an increase in consumption to 68 lbs. per capita, and, frankly, I don't see where it is coming from.

"I have no desire to belittle the importance of Alaska in any respect. What I have to say is based upon first-hand knowledge accumulated during the past twenty years, but it is unfortunate that public expectations of developments in that region should continuously be led so far in advance of actualities."

The PAPER TRADE JOURNAL is like-minded with Mr. Kellogg in not wishing to minimize Alaska's future in the paper making world, for it is probable that eventually Alaska will be an important paper producing district. But it is concerned in seeing to it, so far as it can, that exaggerated reports regarding it shall not be indiscriminately spread. These reports can do no good, but may influence inexperienced people to invest in foolhardy enterprises and bring on the market an additional tonnage of paper when, as Mr. Kellogg convincingly points out, there is an oversupply already and that present mill capacity is likely to meet all requirements for some time to come.

Record Tonnage on Barge Canal

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., November 12, 1928.—The statement coming this week from headquarters of the State Canal Board to the effect that the present season will see established a new record for tonnage on the barge canal is interesting to pulp and paper manufacturers because the great increase in pulp and paper shipments is contributing to this record. The desirability of water transportation is being impressed more and more upon paper mill men because of its comparative economy. Every season for the past several years has seen a steady increase in paper shipments on the barge canal and indications are that these shipments will be increased in 1929 with the expected entrance of some leading Canadian paper manufacturers into the ranks of canal shippers.

The wide gap between rail transportation costs and water transportation costs together with the rapid movement of the water freights has caused some of the large paper mill concerns to establish their own barge fleets operating through the canals from the mill locations in Northern New York and Canada to Metropolitan points. On the trips north these barges usually carry pulp or some other raw material and return with cargoes of finished paper goods.

Recent indications are that Price Bros. & Co., Canada, will be an important factor in transportation on the Champlain Canal next year. The tug "Aqua Taxi" owned by Price Bros. & Co., passed through the Champlain division last week carrying representatives of the company, including F. W. Lambert, on a survey trip. The tug made the trip from Canada through Lake Champlain and the canal and returned by the same route. Mr. Lambert is authority for the statement that Price Bros. & Co., are planning to operate a fleet of motor driven steel barges on the Champlain Canal between their Canadian mills and New York. The barges, he said, will be used to carry newsprint between Canada and New York. The boats will be 110 feet long with 30 foot beam and will each be equipped with two horse power semi-Diesel engines.

The total tonnage carried so far this year is 2,532,000 tons, an increase of nearly 400,000 tons over the same period last year. Shipments between now and the close of navigation are expected to bring these figures over the 3,000,000 tons mark.

Industrial Agreement on Rates of Depreciation

Chicago, November 12, 1928.

EDITOR PAPER TRADE JOURNAL:

It might be of interest for your readers to know that the first agreement on depreciation rates and the methods of depreciation accounting in accordance with the recent plan of the Internal Revenue Bureau has been made with the Folding Box Group of the Paperboard Industries Association.

The "recent plan" so called, consists of a study of depreciation and obsolescence in an industry conducted by a trade association in cooperation with the governmental bureau. The purpose of such an agreement from the Government's standpoint is largely one of economy. With a schedule of rates justified by the experience found in an industry definite instruction can be given to the income tax auditors and much time and discussion can be avoided in their work.

From the standpoint of uniform cost accounting in an industry the establishment of standardized depreciation rates is a big step forward and it was for this reason that I became interested in the plan and devoted the time necessary to bring it to a successful conclusion.

The collection of information and tabulation of results upon which uniform rates could be built up has taken several months. The process consisted first in sending out to every known maker of folding boxes in the country a questionnaire asking not only for the rates he used to cover depreciation and obsolescence of his principal assets of plant, machinery and equipment but also what he considered from past experience to be the years of useful life for each item.

As is to be expected in such responses a wide range of rates was given in some instances varying from a rate of 5 per cent to 20 per cent on the same type of machinery. The next step of tabulation presented a problem because the records of equipment in each plant were incompletely given and when shown were often times not comparable. Fortunately the special census that we compile each year for the folding box industry included the tonnage output for each plant and this was available as a factor in giving recognition of relative size and importance of each response to the questionnaire. The result was a "weighted" average. With this cross section of the best judgement of manufacturers from every section of the country it was not difficult to arrive at a set of rates acceptable to both the Income Tax Division of the Treasury Department and to the industry as a whole.

Upon publication of the agreement the Government's auditors of tax returns will be instructed to accept without question the uniform rates wherever used by folding box manufacturers. Although these rates are not retroactive, they will be operative for use in making 1928 tax returns due in March 1929. Any plant using higher or lower rates in the future must give substantial proof that its condition justifies a deviation from the average and the greater the deviation, the stronger must be the proof.

It is evident that with Government approval and the Publicity given to the findings throughout the industry, it will be but a short time before all folding box plants will adopt the uniform rates as being correct accounting procedure.

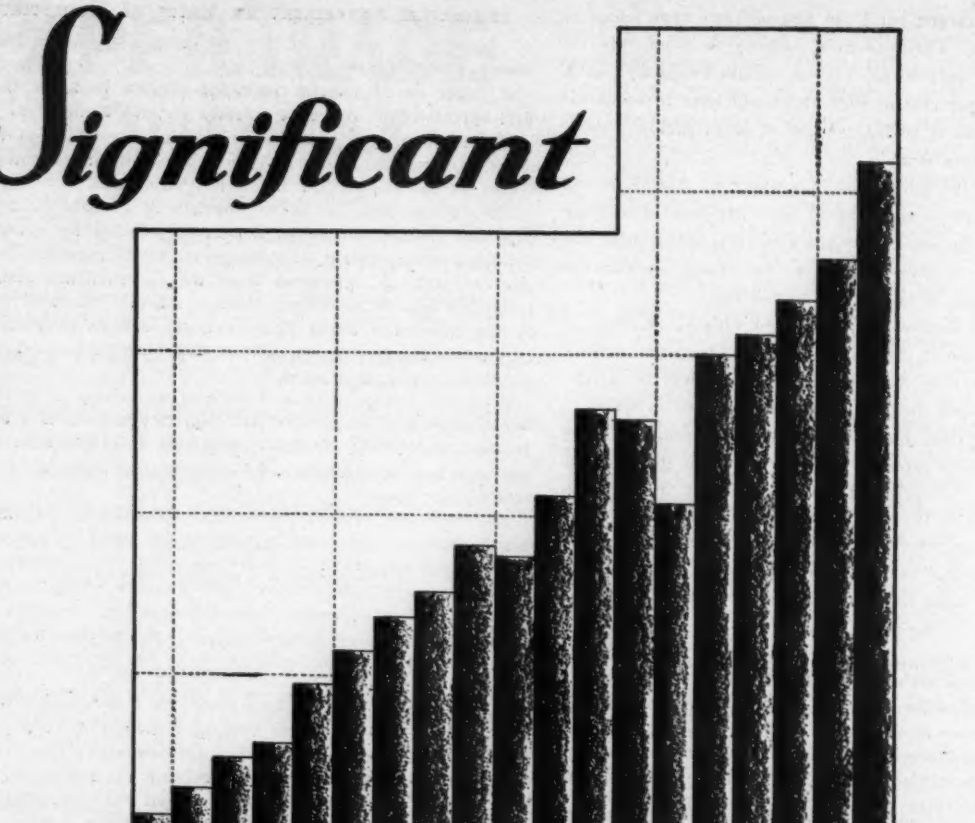
I believe that others will find in this "recent plan" an opportunity to render their industry a distinct service. If any reader wishes further information it may be had by addressing the undersigned.

GRAFTON WHITING, Accountant,
Paperboard Industries Association.

Longstreth Now With Container Corp.

L. E. Longstreth, formerly with the National Aniline and Chemical Company, is now with the Container Corporation of America, as director of technical control of the Chicago Coated Board Mill.

Significant



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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Recent Books on Cellulose

By C. J. West

Prof. Emil Heuser's "Lehrbuch der Cellulosechemie" appeared in its third edition late in 1927 (278 pages. Price 16.80 M). The author maintains his previous positions in dealing with cellulose as a chemical individual, in stressing the fundamentals and in relegating empiricism and technology to a subordinate place. This edition, like the second, contains chapters on alcoholate formation, on cellulose esters and ethers, on the oxidation and degradation of cellulose and on the constitution of cellulose; all these chapters have been rewritten and enlarged and are replete with references to the newer literature which covers most of the advances in the cellulose field through Aug., 1927. A brief but timely chapter on the investigation of cellulose by means of X-rays has been added; it is little more than a synopsis but gives a valuable bibliography and is written by Prof. R. O. Herzog.

The second edition was translated into English, but there is little likelihood that the third edition will be translated, as the demand for the English edition was such that neither the translators nor publishers will feel like undertaking a new edition.

Microbiology of Cellulose, Hemicelluloses, Pectins and Gums

A second book is "The Microbiology of Cellulose, Hemicelluloses, Pectins and Gums," by A. C. Thaysen and H. J. Bunker (363 pages. Price $8.50). Part I (23 pages) deals with the nature of cellulose, hemicellulose, pectin and gum; part II (p. 27-158) is given over to a description of the organism responsible for the destruction of cellulose and its associated substances; part III (p. 161-309) deals with the decomposition of gums, pectins, hemicelluloses and cellulose.

Die Chemie der Zellulose und Ihrer Begleiter

A third and the most important of the books here listed is Prof. Kurt Hess's "Die Chemie der Zellulose und ihrer Begleiter (The chemistry of cellulose and its associated compounds). (836 pages. 59 M.). We quote below the review from the pen of Dr. L. E. Wisem in the Journal of the American Chemical Society.

The long expected *magnum opus* from the pen of Professor Hess has finally appeared and will rank for some time to come as the outstanding monograph on the chemistry of cellulose. After a brief introduction and a chapter on the development of the cell wall, the author plunges into a comprehensive review of compounds associated with cellulose, their isolation and analysis, and reactions which throw some light on their possible constitution. Not a little of this long chapter is devoted to lignin and rounds out Fuchs' excellent monograph on lignin by including the very recent and important investigations of Freudenberg, Hägglund, and Herzog.

Subsequently we find a good review of the isolation and purification of cellulose and its solution and reprecipitation. Here, as we might expect, the cuprammonium solutions are discussed at length, since their polarimetric study first led Hess to the hypothesis that the ultimate cellulose molecule is [$C_6H_{10}O_5$], an hypothesis which he still maintains. Substitution products of cellulose also receive particular attention since Hess' laboratory has systematically studied cellulose esters and ethers, obtaining them in microcrystalline form and determining their molecular weights in various solvents. One of the longest sections in the book is devoted to the degradation of cellulose and here again the work of Hess' laboratory is brought to the fore. An interesting section deals with cellulose acetolysis in which, according to Friese and Hess, cellobiosan acetate is the exclusive product in the earlier stages of the reaction. The final section of Hess' portion of the work is devoted to problems of constitution, in which the author points out experimental methods for determining the possible size of the cellulose molecule. He ends in expressing the hope that researches on the synthesis of glucosans will be forthcoming in the near future.

Professor Hess has been fortunate in his choice of collaborators. Dr. J. R. Katz of the University of Amsterdam, has added a thorough and scholarly presentation of the micellar theory and the swelling of cellulose, which is very welcome. A chapter presented historically, on the anisotropy of cellulose, is followed by another which Dr. Katz entitles "Is Cellulose a Crystalline Body?" and which includes detailed X-ray studies on natural fibers and on cellulose derivatives, and a useful supplement on the technique used in this type of work. Subsequently Dr. Katz critically and cautiously discusses various estimates of the size and arrangement of crystallites in cellulose fibers. The final and perhaps the most stimulating part of Dr. Katz' section of the book is devoted to the mechanism of swelling of cellulose, and merits a careful reading by all investigators in the field of cellulose chemistry.

In the very last portion of Dr. Hess' book we find a satisfactory chapter by Dr. R. Haller on the behavior of cotton and artificial cellulose fibers toward dyes.

Some cellulose chemists may take issue with Dr. Hess on certain of his hypotheses and feel that the experimental data presented in their support are quite inadequate. However, these very hypotheses are driving Hess' more cautious colleagues into new and untried fields of investigation, and for this alone he deserves their unstinted praise. He has given them an interesting reference book, the importance of which is beyond question.

Sanitary Analyses in the Pulp and Paper Industry*

By L. F Warrick [1]

In connection with the activities of the Committee on Waste Utilization and Stream Improvement of the American Paper and Pulp Association there has developed a need for standard methods of analysis to be used by the industry in determining the physical and chemical characteristics of wastes produced and streams receiving these wastes. Uniform methods of sampling and analysis are essential if comparable results are to be obtained by various mill laboratories cooperating in the program adopted for waste recovery and improvement of stream conditions. It is the purpose of this paper, therefore, to outline methods of sanitary analysis which have been found satisfactory and taken as at least "tentatively standard" in the cooperative activities of the Wisconsin pulp and paper industry and State Board of Health.

Primary Phases of the Problem

There are two primary phases to the problem of developing standard methods of waste analyses in the Pulp and Paper Industry, depending on whether the chief consideration is: (1) waste utilization or (2) stream improvement. The first involves analyses to determine amounts of recoverable materials of different kinds in the various wastes, and the second involves analyses to evaluate the pollution characteristics of a waste or a stream. This Association, through publication of "Paper Training Methods"[2] the United States Forest Products Laboratory, through its bulletins and reports, and other organizations or agencies in a similar manner have already made excellent progress in establishing standard analytical procedures for pulp and paper mill laboratories, but this work needs to be extended to include generally applicable methods for sampling and testing mill effluents in the determination and control of losses. The expression of results should be uniform and in such units as can be readily understood by the non-technical man. They should admit as far as possible comparison between mills manufacturing the same type of product.

Development of Methods

Obviously the development of methods to be followed in the testing of mill effluents from the waste utilization point of view is the primary concern of the technical personnel of the Industry. Analyses from the stream improvement phase of the problem on the other hand constitute procedures which must be worked out and standardized by the sanitary chemists and engineers of Federal, State and other agencies involved in the cooperative activities to reduce stream pollution to a minimum. The following discussion, therefore, is devoted entirely to the application of sanitary analyses to pulp and paper mill wastes in determination of the effect on waters into which they are discharged.

Samples

In obtaining samples for analyses it is essential that they should be collected in such a manner as to be truly representative of the wastes. Satisfactory samples sometimes necessitate a composite or mixing together of portions collected at different times, or at different places, the details as to mixing and collection depending on local conditions. Weirs and continuous sampling devices such as described by Edwards[3] are found to be of considerable assistance in this respect. These devices make it possible to collect the samples proportionate to the flow. Such an installation is shown in Fig. 1.

The minimum quantity of wastes required for the ordinary physical and chemical analyses is 2 liters. In special cases larger quantities may be required, but it is rarely necessary to exceed 4 liters. These samples should be analyzed as soon as possible after collection, since no single method of preservation is entirely satisfactory. If, however, it is necessary for the samples to stand six hours, or more before analysis, they should be treated with chloroform, using 6 cc. per liter, and kept in a cool place. The precaution applies more particularly to whitewater wastes since

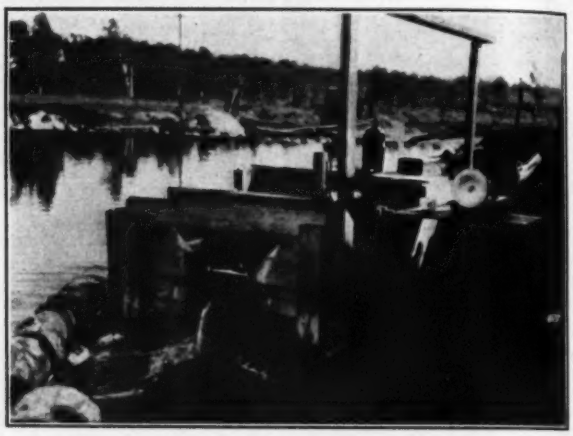

FIG. 1

Typical View of Recording Device Used in the Measurement of Volumes of Wastes Discharged by Pulp and Paper Mills. These facilitate the Collection of Truly Representative Samples of the Wastes for Analyses. 1. Weir Box and Weir. 2. Hook Gauge for Checking the Head on the Weir. 3. Water Level Recording Device. 4. Graduated Cylinder and Bottle Used in Collecting a Composite Sample of the Wastes.

a number of the chemical wastes are acid, caustic or germiciadl in character and retard or prevent changes in such samples through biological action.

The equipment and procedure used in collecting samples in the stream surveys conducted in Wisconsin are described in a special report, "Stream Pollution in Wisconsin",[4] copies of which can be obtained from the State Board of Health. For further information concerning sampling methods the reader is referred to Stand-and Methods of Water Analysis.[5]

Sanitary Analyses

Sanitary analyses of water, sewage, and industrial wastes are generally made in accordance with Standard Methods.[6] With certain trade wastes, including some produced by the Pulp and Paper Industry, it is necessary to further standardize the procedures recommended in order to obtain comparable results between laboratories. In some cases it is desirable to develop entirely new methods to reduce time and labor involved, to increase accuracy of determinations, or to provide additional information. To these ends, a continuous program of research is essential.

Though sanitary analyses as far as pulp and paper mill effluents are concerned could be classified and discussed as physical and chemical tests, it is believed desirable that only those procedures of

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* Presented at Fall Meeting of TAPPI, Madison, Wis., Sept. 26, 1928.

[1] State Sanitary Engineer, Wisconsin State Board of Health.

[2] "Paper Testing Methods," by TAPPI (1928). Pub. by Lockwood Trade Jour. Co., 10 E. 39th St., New York.

[3] "How to Measure White Water Losses," by Vance P. Edwards. The Paper Industry, Vol. 7, No. 2, pp. 215-220, May, 1925.

[4] "Stream Pollution in Wisconsin," Joint Report Wisconsin Conservation Commission and State Board of Health, p. 102-103, January, 1927.

[5] "Standard Methods of Water Analysis," by The American Public Health Assn., 6th ed., p. 69-70 (1925).

[6] Ibid. p.

ANALYSES IN ORDER OF IMPORTANCE

1. Oxygen demand
2. Dissolved oxygen
3. Oxygen consumed
4. Solids
   a. Total
   b. Suspended (fixed and volatile)
   c. Solution (fixed and volatile)
5. Nitrogen, as
   a. Organic nitrogen
   b. Free ammonia
   c. Nitrites
   d. Nitrates
6. Alkalinity, or acidity
7. Hydrogen-ion concentration, or "pH" value.
8. Physical conditions
   a. Temperature
   b. Color
   c. Odor
   d. Turbidity
9. Special determinations—depending upon the nature of the mill waste under consideration.

particular significance be presented in order of importance. No hard and fast rule regarding the relative value of the analytical determinations can be stated, but the following list is presented in what may be considered, in general, the order of most importance in pulp and paper mill waste treatment and stream improvement investigations:

For the benefit of those who are not acquainted with the technique and significance of these analyses a brief discussion is herewith presented. Detailed descriptions of the most important procedures, pointing out modifications necessary with certain mill effluents, are included in the appendix.

Oxygen Demand

The oxygen demand test is used to evaluate the pollutional character of waste, or the potential oxygen requirement of unstable substances in a stream. A small portion of the sample to be tested is mixed in a bottle with a relatively large volume of water containing a known amount of dissolved oxygen. The bottle is sealed to prevent contact with the atmosphere and allowed to stand at a temperature of 20° C. or 70° F. for certain periods of time, after which the dissolved oxygen remaining in the mixture is determined. The difference between the initial and final oxygen content represents that used up by the measured quantity of waste. A correction is made by the similar treatment of a sample of water not containing the waste to make allowance for any oxygen demand the water itself may have. Thus the analyst approaches as nearly as possible the actual changes that take place in a stream when it is polluted by this waste.

Dissolved Oxygen

The dissolved oxygen test indicates the total amount of free oxygen available in a stream to take care of the oxygen demand of wastes and support fish or other aquatic life.

The procedure used in the determination of dissolved oxygen is the Rideal Stewart Modification of the Winkler Method, and is in general carried out in accordance with Standard Methods.[7] Under special conditions, however, some changes are found desirable. These are outlined in the appendix of the U. S. Public Health Service Bulletin No. 151.[8]

Oxygen Consumed

The oxygen consumed test consists in the oxidation of the unstable organic matter by digesting a mixture of the sample, sulphuric acid and potassium permanganate for a period of thirty minutes at boiling temperature. The oxygen removed from the potassium permanganate is used as a measure of the oxygen-consuming capacity of the waste. The test does not so nearly approach natural conditions and, therefore, is regarded as being less significant than the oxygen demand test. It furnishes a measure of the unstable organic content of the samples.

Solids

The total and suspended solids are determined by evaporation to dryness and weighing of measured quantities of a sample both before and after passing through a filter. The difference between the weights thus obtained represents the amount of suspended matter. The weight of the unfiltered portion represents the total solids. If the heating is continued to a dull red temperature, the organic matter is ignited and driven off. Only the mineral residue remains. The loss in weight occasioned by the removal of the organic matter is termed loss of ignition, or volatile matter. It thus becomes a measure of the total organic content of the sample.

Nitrogen

The tests for nitrogen are of particular importance in connection with stream pollution by sewage and certain classes of pulp and paper mill wastes, such as rag digester and washer wastes.

The determination of nitrogen as organic nitrogen, free ammonia, nitrites and nitrates, are carried out in accordance with Standard Methods,[9] and will not be described in detail. It is sufficient to state that it is one of the most valuable indices of the strength of a sewage and the extent of sewage pollution, also of the natural changes that may have taken place in a polluted stream. The larger the amount of free ammonia and nitrites in a stream the more recent the pollution. The presence of nitrates with little or no free ammonia and nitrites indicates that the nitrogenous content of the organic matter has been stabilized or is in a condition to be used as a fertilizer for aquatic vegetation.

Acidity and Alkalinity

The determinations of alkalinity or acidity give an indication as to the effect of the waste on aquatic life. The hydrogen-ion concentration, often represented by the shortened expression "pH" value, is a measure of the degree of acidity or alkalinity. Certain fish and plant life in streams are reported to be very susceptible to changes in the character and degree of acidity or alkalinity of the water. The determination of the "pH" of wastes is useful in controlling treatment processes.

Physical and Special Determinations

The physical determinations such as temperature, color, odor, turbidity, etc., are of minor importance and are used only as aids in the interpretation of other results. Temperature determinations, usually expressed in degrees centigrade, are necessary to express dissolved oxygen results in terms of per cent saturation. Special determinations are made only in cases where wastes causing pollution contain substances of an unusual nature, such as the determinations of sulphur dioxide in sulphite pulp mill wastes.

Expression of Results

The expression of the results of sanitary analyses is in terms of parts per million by weight, which is substantially equivalent to milligrams per liter for most pulp and paper mill wastes. Any error involved in the assumption that 1 liter of the waste measured out for analysis weighs 1 kilogram can be corrected by dividing results obtained by the specific gravity of the waste.

It is often desirable to convert results obtained with mill wastes into pounds per thousand gallons or pounds per ton of product (pulp or paper produced). This can be accomplished by the use of suitable conversion factors given in the appendix.

APPENDIX I.

Procedure Used in the Determination of the Oxygen Demand of Pulp and Paper Mill Wastes

The following procedure for the determination of the oxygen demand of pulp and paper mill effluents has been adopted in Wisconsin as a "tentative" standard method.

I. SAMPLES:

Composite samples covering one complete cycle of mill operation (such as the digester blow-off period in a sulphite mill) are collected for analysis. Samples are proportioned according to volume of flow. Automatic sampling devices such as described by Edwardes in "How to Measure White Water Losses," Paper Industry, Vol. 7, No. 2, pp. 215-220, May, 1925, have

[7] Ibid. p.
[8] "The Determination of Dissolved Oxygen by the Winkler Method," by E. J. Theriault, U. S. P. H. S. Bulletin No. 151, p. 41-43, March, 1925.
[9] "Standard Methods of Water Analysis," by A. P. H. A., 6th ed., p. — (1925).

been found of much assistance in securing a representative sample.

II. Apparatus:

The apparatus used in making the oxygen demand test is the same as outlined in Standard Methods of Water Analysis under the dilution method. Equally good results have been obtained with dilutions made in graduated cylinders as in measuring flasks as outlined in the USPHS Bulletin No. 151. Stirring is accomplished by a spiral glass rod or perforated cone. The 250 cc. glass stoppered bottles with water seals described by Mohlman in the Journal of Industrial and Engineering Chemistry, Vol. 20, No. 3, pp. 242-246, March, 1928, are most satisfactory, but for field work citrate bottles have been used to some advantage. A suitably designed 20 degree C. incubator or constant temperature room is essential. Two or more large bottles (5 to 10 gals.) are needed for the standard dilution water.

III. Standard Dilution Water:

Distilled water to which has been added 0.5 grams per liter of sodium bicarbonate, and which has been stored preferably at incubator temperature for a period of not less than ten days or until thoroughly stabilized, has been adopted as a "tentatively standard dilution water." It has been suggested that the pH of this water be adjusted to 7.0-7.5 by carbon dioxide treatment as a matter of further standardization, but has not been adopted pending further research.

IV. Reagents:

Reagents are prepared as outlined in Standard Methods of Water Analysis, 6 Ed. of the APHA., p. 59.

V. Procedure:

1. Prepare bottles, two for diluting water, one for dissolved oxygen on waste, one for initial oxygen demand of waste and one for each concentration for each day to be tested, and one for dilution water for each day, e.g., for one sample 12 bottles are required. For each additional sample add 8 bottles, when incubated samples are to be tested on the 5th and 10th day and three concentrations are incubated. Bottles should be kept clean. Use cleaning solutions and rinse bottles thoroughly.
2. a. Make dissolved oxygen test on diluting water; check water again after making dilutions.
   b. Determine initial oxygen demand of waste, i.e., the 30 minute depletion of dissolved oxygen in a mixture of the waste and diluting water from the calculated dissolved oxygen.
   c. Make dissolved oxygen test on waste.
3. With very strong wastes
   Make stock solutions. The strength of the stock solution required depends on the oxygen demand of the waste. For instance, sulphite waste liquor having a very high demand, a 10 cc. portion is diluted to 5 liters. The dilutions with less concentrated wastes, such as white water from a paper mill, can be made without the preparation of a stock solution. These stock solutions are inoculated with sewage bacteria.

   In the case of acid or caustic wastes with low oxygen demand (such as sulphite or sulphate and soda pulp mill washings), and thus requiring low dilution ratios, it may be found desirable to carry out the following procedure:

   (a) Take a 100 cc. portion of the waste and titrate with standard acid or alkali to Brown phenol Blue end point and calculate the amount of acid or alkali to neutralize the sample.

   (b) Neutralize sample of waste and add approximately 50 p.p.m. $NaHCO_3$.

   This last procedure has not, however, been adopted as standard pending further research.
4. Make dilutions with the wastes or stock solutions, the dilution ratios being adjusted by trial so that at the end of the incubation period more than 30 per cent and less than 90 per cent depletions of the available oxygen are obtained. For instance with sulphite waste liquor dilutions of 1:1000, 1:2000 and 1:4000 have been found necessary.
5. Dilutions made in graduated cylinders or in volumetric flasks are thoroughly mixed by raising and lowering the siphoning hose (with glass tube tips) while making the dilutions and filling the bottles, also by use of the stirring rod or perforated cone.
6. Inoculate diluting water and fill bottles for incubation, one for each day on which tests are made.
7. Incubate bottles at 20 degrees C. for 5 and 10 day periods (5 day oxygen demand has been adopted as standard for routine work).
8. On 5th day determine the dissolved oxygen of one bottle of diluting water and one bottle of each concentration of waste. Standard Methods of Water Analysis are followed in the determination of oxygen, the Rideal-Stewart modification of the Winkler Method being used.
9. Record and calculate results; for a complete discussion see USPH Bulletin No. 151.
10. On the 10th day determine the dissolved oxygen of the other bottle of diluting water and the other bottles of concentrations of waste.
11. Record and calculate results.
12. Results will be expressed in parts per million of oxygen demand for the stated incubation period. They should also be expressed in pounds of oxygen required per 1,000 gallons of wastes, and when feasible, per unit of product. (Ton of pulp or paper produced.)

Corrosion Resistant Agitator Shafts

Special Inquiry No. 116

A member writes: "We are about to build a number of new stuff chests. We want to equip these with agitators that will not give off iron into our products. We find that our present agitators are made of cold rolled steel and that the alum and chlorine in our product corrodes the iron and causes discoloration of the paper.

"We would like to have advice as to the material that we should use in these chests (brass, stainless steel, nickel steel or other material.")

The inquiries handled under the Service to Members plan of TAPPI are of greatest value to all who participate when the replies received are from all types of technical men, executives, superintendents, engineers, and chemists. Please bring this inquiry to the attention of those qualified to contribute information of value.

All who contribute to this inquiry will receive a transcript of all the replies received. Send responses to

R. G. Macdonald, *Sec.* TAPPI,
18 E. 41st St., New York.

Japanese Paper Man Visits Watertown

Albany, N. Y., November 12, 1928.—Kozo Suehiro, chief engineer of the Oji Paper Company, of Tokio, Japan, is this week the guest of officials of the Bagley & Sewall Company, of Watertown. While in this section he plans to visit the plants of the Newton Falls Paper Company, the St. Regis Paper Company, Bagley & Sewell Company, and the Dexter Sulphite Company. Mr. Suehiro is in charge of one of the sulphite mills of the Oji Company. He has been on an extensive tour of the sulphite mills of the world, having left Japan nine months ago. He passed considerable time in Europe before coming to this country and was met in New York by Clarence E. Kinne, of the Bagley & Sewall Company. The Oji Paper Company operates a group of mills which house sixteen paper machines constructed by the Bagley & Sewall Company. Seven of these machines were installed at the plant where Mr. Suehiro is located.

Pulping Eastern Hemlock by Sulphite Process*

1.—The Effect of Varying the Time and the Temperature of Impregnation

By W. H. Monsson[1] and G. H. Chidester[2]

Although the consumption of eastern hemlock by sulphite mills in the Lake States region has increased during the past few years, mainly as a result of the scarcity and the high price of domestic spruce, no literature bearing on the question of optimum cooking conditions for the species has been made available. Accordingly experimental studies in the pulping of eastern hemlock by the sulphite process were undertaken at the U. S. Forest Products Laboratory. The penetration period was selected as the first subject for investigation because it is now recognized as a separate and extremely important portion of the total pulping cycle. The immediate objective of the studies was to determine if possible the optimum conditions for penetration of the chips as shown by the yield of screened pulp, the amount of screenings, and the strength qualities and bleach requirements of the pulps produced. This paper, the first of the series presenting the information derived, sets forth the results obtained in a group of semi-commercial-scale pulping experiments in which either the time or the temperature of the penetration period was varied, other factors being held constant.

Previous Work

During the past few years the Laboratory has made many pulping tests on eastern hemlock and similar species, but the work has been of an exploratory nature and as a result no particular effort was made to arrive at optimum pulping conditions. On the other hand, the results so obtained have been valuable as a guide in this study.

Characteristics of Wood

The species of the wood employed in the experiments was identified as *Tsuga canadensis*. The pulp wood used for the tests consisted of tops cut from trees grown in northeastern Wisconsin. In order to obtain an idea of the uniformity of the wood as well as to record certain physical properties, specific gravity tests were made on disks cut from a number of the logs. The specific gravity values are expressed as oven-dry weight of green volume. The samples, which were taken at random, represented approximately 30 per cent of the total logs used. The age of each specimen was determined by counting the annual rings. The average diameter of the disk inside the bark was also determined. A value for average growth rate was obtained by dividing the number of annual rings by the radius of the bolt. All these values are given in Table 1.

Specific Gravity Varies Widely

The tabulation makes evident the fact that the specific gravity of the wood, which influences considerably the penetration of the chips by the acid cooking liquor, varied widely. For spruce and balsam fir it has been shown[3] that there is a relationship between the average growth rate and the specific gravity of the bolts. This relationship did not hold for the eastern hemlock examined.

In order to obtain as much uniformity as possible in the material for the various cooks, the chips forming the total supply were thoroughly mixed before any of the experimental cooks were made.

Temperature and Time Schedules

The temperature and time schedule, as pointed out in the pulping of spruce[4] and of hardwoods,[5] has been shown to be one of the major factors in the pulping of any species by the sulphite process. In this series of experiments both the time and the temperature of the penetration period were varied in turn, one of the two factors always remaining constant.

The pulping schedules followed from the end of the penetration period to the maximum temperature, 148 degrees C., were all of seven hours duration and of the same type, namely, the so-called "straight-line rise." The temperature at the beginning of the pulping period varied, depending upon the highest temperature of the penetration period. Three such high temperatures were used, 110 degrees, 115 degrees, and 120 degrees C. The time required to reach these temperatures was varied as follows: 1.5, 2.0, 2.5, 3.5, and 5 hours to 110 degrees C., 1.5, 2.0, and 2.5 hours to 115 degrees C., and the same to 120 degrees C.

The effects of the variations in procedure just described were recorded by determining the yield of screened pulp and screenings, the bleachability, and the strength development of the pulps produced.

Experimental Equipment and Procedure

The experimental cooks were all made in the Laboratory's semi-commercial sulphite digester,[6] which has a capacity of about 85 pounds of oven-dry chips.

The cooking acid used was adjusted so as to approximate 5.50 per cent total sulphur dioxide, of which about 1.30 per cent was present as combined sulphur dioxide.

In order to counteract the excessive condensation of steam caused by the abnormal radiation from the small-sized equipment, both direct and indirect steam heating were used for the digester. The steam for direct heating was so regulated in amount that the dilution effect of the condensed steam was similar to that obtained in commercial "quick-cook" practice. This variable is under control by observation and test of the relief liquor.

Temperature and Pressure Schedule

The rate of temperature increase and the pressure schedule for each cook are shown in Figs. 1, 2, 3, and 4. A maximum pressure of 75 pounds was used throughout, followed by a uniform relief period at the completion of the cook.

Yield determinations were made by screening the pulp over a diaphragm screen having 0.012 inch slots. Samples for moisture determination were taken at regular intervals as the pulp was run over the experimental wet machine. Knowing the total weight of wet pulp and the moisture content, the oven-dry weight of pulp was calculated. Screenings were oven-dried and weighed.

The bleach requirement of the various pulps were determined by treating a sample equivalent to 25 grams (oven-dry weight) of pulp, in a water suspension at a constant consistence of 1.5 per

TABLE 1
PHYSICAL PROPERTIES OF EASTERN HEMLOCK PULP WOOD

Disk No.	Specific gravity (oven-dry volume)	Weight per cubic foot (oven-dry) Pounds	Age (annual rings) Years	Average diameter (barked and oven-dry) Inches	Annual rings per inch
1	0.386	24.1	100	6.37	35.40
2	.448	28.0	168	6.00	56.00
3	.497	31.1	130	6.56	39.70
4	.419	26.2	46	5.87	15.70
5	.429	26.8	188	6.87	54.80
6	.416	26.0	159	7.31	43.60
7	.452	28.2	157	7.56	41.60
8	.406	25.4	98	6.87	28.60
9	.479	30.0	212	4.93	86.00
10	.573	35.8	150	5.00	60.00
11	.424	26.5	66	5.62	25.80
12	.491	30.7	110	4.37	50.10
13	.366	22.9	49	6.50	15.06
14	.472	29.5	181	7.00	51.80
15	.406	25.4	105	6.37	32.90
16	.415	25.9	135	7.12	37.90
17	.401	25.0	165	7.50	44.00
Average	0.440	27.5	130	6.34	41.00

[1] Associate Chemist in Forest Products, U. S. Forest Products Laboratory, Madison, Wis.
[2] Assistant Engineer in Forest Products, U. S. Forest Products Laboratory, Madison, Wis.
[3] Pulp and Paper Mag. of Canada, International Number, 139-149 (Feb., 1928).
[4] Paper Trade J. 82, No. 9, 62-64 (1926).
[5] Paper Trade J. 86, No. 17, 59-62 (1928).
[6] A complete description of the equipment may be found in U. S. Department of Agriculture Bulletin No. 1485, 11-15 (1927).

TABLE 2
COOKING CONDITIONS EMPLOYED, AND YIELDS AND BLEACH REQUIREMENTS OF HEMLOCK SULPHITE PULPS[1]

Cook No.	Temperature and pressure curve with time, reference figure	Acid composition[2]			Total time of penetration period, hours	Maximum temp. at end of penetration period, °C.	Total[3] cooking cycle including pene. period, hrs.	Yield of oven-dry pulp, based on oven-dry weight of wood			Bleach requirement, based on 35% bleach powder, per cent
		Total SO_2, per cent	Free SO_2, per cent	Combined SO_2, per cent				Total pulp, per cent	Screened pulp, per cent	Screenings, per cent	
3299-I	1	5.55	4.27	1.28	1.5	110	8.5	44.0	40.6	3.40	35+
3300-I	1	5.50	4.18	1.32	1.5	115	8.5	44.25	40.6	3.65	28
3301-I	1	5.50	4.18	1.32	1.5	120	8.5	44.15	40.9	3.25	28
3315-I	2	5.50	4.20	1.30	2.0	110	9.0	48.25	45.85	2.40	34+
3321-I	2	5.50	4.18	1.32	2.0	115	9.0	45.95	43.6	2.35	30
3322-I	2	5.60	4.30	1.30	2.0	120	9.0	45.50	43.1	2.40	28
3309-I	3	5.50	4.20	1.30	2.5	110	9.5	46.80	44.2	2.60	34+
3310-I	3	5.55	4.29	1.26	2.5	115	9.5	47.80	45.6	2.20	30
3312-I	3	5.50	4.19	1.31	2.5	120	9.5	45.60	43.1	2.50	30
3323-I	4	5.50	4.25	1.30	3.5	110	10.5	45.75	43.3	2.45	32+
3324-I	4	5.40	4.08	1.32	5.0	110	12.0	44.15	42.7	1.45	26

[1] Maximum cooking temperature held constant at 148 degrees C. Maximum cooking pressure held constant at 75 pounds gauge.
[2] Acid composition held as nearly constant as possible.
[3] The pulping period following the impregnation period was held constant at seven hours duration.

cent, with varying ratios of bleach powder to pulp. Temperature was maintained constant at 35 degrees C. and the stirring was continuous until the chemical was exhausted. The pulp was then thoroughly washed, made up into hand sheets, and dried. After careful pressing of the dry sheets, color measurements were made on the samples by the use of the Hess-Ives tint photometer. Samples of bleached Burgess sulphite pulp were used as a standard for comparison. The bleach requirement was taken as the amount of bleach powder needed to bleach the sample of pulp to the same degree of whiteness as that of the standard.

The ability of the pulps to develop fiber strength was determined by the ball-mill method as standardized at this Laboratory. Test sheets were prepared from the unbleached pulps after 20, 40, 60, and 80 minutes milling. Bursting-strength, folding-endurance, and tearing-strength tests were made for each milling period and each cook.

Tabulation of Results

The pulping conditions, pulp yields, and bleach requirements are presented in detail in Table 2.

The data on the development of fiber strength by ball-milling the unbleached pulps are presented in detail in Table 3.

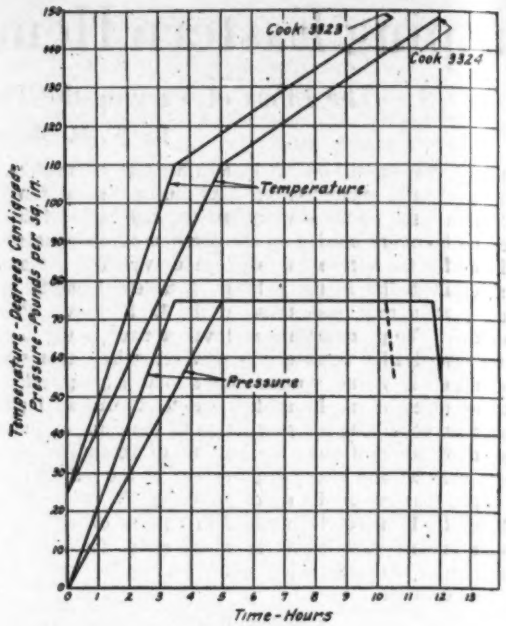


FIG. 4
Temperature-Pressure Chart for 3.5 and 5 Hours Penetration Periods.

Discussion of Results

As previously stated, the main emphasis in the experimental work performed thus far has been placed on the investigation of the penetration period by varying its time and the temperature employed; the effects of such variation were gauged by the yield of screened pulp, the amount of screenings, and the strength qualities and bleach requirement of the pulps produced.

EFFECT UPON YIELDS

Increasing the temperature at 1.5 hours time had no effect on the total yield of pulp and the percentage of screenings. The total yield of pulp for each of the three cooks was low and the screenings were comparatively high. On the other hand, increasing the

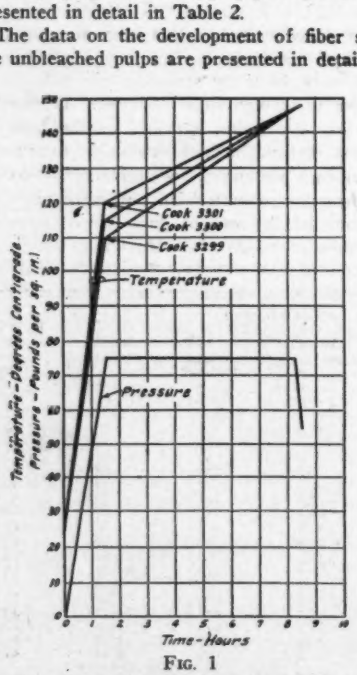


FIG. 1
Temperature-Pressure Chart for 1.5 Hours Penetration Period.

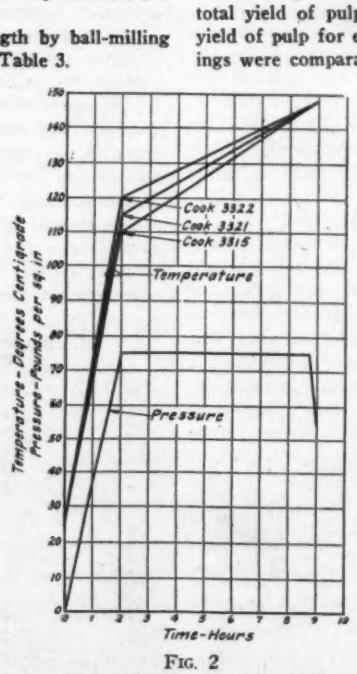


FIG. 2
Temperature-Pressure Chart for 2.0 Hours Penetration Period.

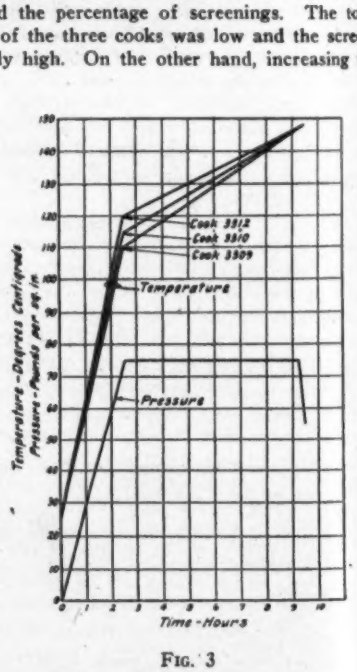


FIG. 3
Temperature-Pressure Chart for 2.5 Hours Penetration Period.

TABLE 3.—DEVELOPMENT BY BALL MILLING OF THE FIBER STRENGTH OF UNBLEACHED HEMLOCK SULPHITE PULP

Cook No.	Strength-test results: Bursting-strength factor in points per pound per ream of 24" x 36", 500 sheets, when refined in the ball mill for				Folding endurance in double folds when refined in the ball mill for				Tearing-strength factor in grams per pound per ream when refined in the ball mill for			
	20 min.	40 min.	60 min.	80 min.	20 min.	40 min.	60 min.	80 min.	20 min.	40 min.	60 min.	80 min.
3299-I	....	0.75	0.96	0.95	...	227	347	483	....	2.39	2.30	1.96
3300-I	0.49	0.72	0.82	0.85	37	144	279	384	2.30	2.63	2.36	2.03
3301-I	0.50	0.69	0.82	0.87	58	98	351	461	2.24	2.32	2.57	2.22
3315-I	0.65	0.87	1.02	1.02	43	207	197	334	2.39	2.31	2.17	1.99
3321-I	0.74	0.90	0.97	0.90	140	214	318	350	2.59	2.67	2.39	2.20
3322-I	0.57	0.80	0.94	0.78	92	180	538	425	2.71	2.61	2.49	2.05
3309-I	0.68	0.90	0.97	0.97	104	294	501	382	2.85	2.68	2.39	2.21
3310-I	0.69	0.88	1.00	0.88	39	223	402	505	2.12	2.23	2.11	1.84
3312-I	0.67	0.74	0.96	0.92	58	250	621	517	2.35	2.61	2.22	2.30
3323-I	0.70	0.91	1.01	0.96	105	233	448	420	2.51	2.75	2.42	2.41
3324-I	0.65	0.84	0.96	0.90	80	295	251	472	2.46	2.71	2.25	2.20

Note: The maximum values are underscored throughout the table. Where the 80-minute value is underscored, increased duration of milling is necessary to determine whether this value is in reality the maximum.

temperature at 2.0 and 2.5 hours had a decided effect on the total yield of pulp. The yields of total pulp and of screened pulp decreased with no change in the percentage of screenings.

Maintaining the temperature constant at 110 degrees C. and increasing the time of the penetration period resulted in an increase in the total yield of pulp and a decrease in screenings. For the 5 hour period the total yield of pulp was slightly lower than had been expected. Even though the total yield was low the screened pulp was 2 per cent higher and the screenings were 2 per cent lower than the corresponding yields obtained for the experiment in which 1.5 hours was used for penetration.

Increasing the time at 115 degrees C. and 120 degrees C., respectively, resulted in an increase of total yield of pulp and a decrease in screenings. Pulping experiments having longer periods of penetration than 2.5 hours were not made at the higher temperatures.

The pulps of highest yields and lowest percentage of screenings were obtained from the experiments in which a 2-hour or longer period was used for penetration. The maximum temperature of penetration seems not to affect the yield properties very markedly, except when short penetration periods are used. A temperature of 115 degrees C. may be used as the maximum temperature with good results.

Effect Upon Bleachability

An increase in the maximum temperature for any penetration period of constant length results in a lowering of the bleach requirement of the pulps.

Holding the temperature constant at 110 degrees C. and increasing the time of penetration from 1.5 to 2.5 hours had no effect on the bleach requirement of the pulps. A further increase in time of penetration from 2.5 to 5 hours lowered the bleach requirement from 34+ per cent to 26 per cent.

A slight increase in the bleach requirement resulted as the temperature was held constant at 115 degrees C. and 120 degrees C., and the time increased. For all practical purposes this increase in bleach requirement may be neglected, since it was only 2 per cent.

The optimum conditions in regard to bleach requirement of the pulps are obtained by utilizing the higher temperatures (115 degrees C. and 120 degrees C.) for periods of 1.5, 2.0, and 2.5 hours, or by extending the time at the lower temperature (110 degrees C.) to at least 5 hours.

Effect Upon Bursting Strength

The bursting-strength factor of pulps from experiments in which a temperature in excess of 110 degrees C. is reached in 1½ hours time are somewhat low. Increasing the temperature at longer periods apparently has no effect on the bursting properties of the pulps. The maximums are reached after 60 minutes refining in the ball mill.

With an increase in time, and the temperature constant at 110 degrees C., no increase in the maximum bursting-strength factor was noted. On the other hand, an increase in bursting properties resulted upon increasing the time at temperatures of 115 degrees C. and 120 degrees C.

The conditions that yield pulps with maximum bursting properties indicate that 2 to 2½ hours time is essential for the increase to a temperature of 110 degrees C. to 120 degrees C.

Effect on Folding Properties and Tearing Strength

There are no general trends in the folding-endurance or tearing-strength factors of the pulps with increased temperature or time.

Summary

The results obtained in this series of pulping experiments may be summarized as follows:

The yields of pulp decrease with an increase in temperature during the penetration period, the amount of screenings remaining practically constant.

With an increase in the time of the penetration period the yields of pulp increase for temperatures of 115 degrees C. and 120 degrees C., but fail to do so for 110 degrees C.

A decrease in screenings is obtained by increasing the time of the penetration period.

A definite reduction in the bleach requirement of the pulps is obtained with an increase in temperature of the penetration period.

The bursting strength factor decreases as the temperature of the penetration period is increased from 110 degrees C. to 115 degrees C. and 120 degrees C., at 1½ hours time.

As the time of penetration is increased for 115 degrees C. and 120 degrees C., respectively, the bursting strength factor increases.

Suit Started Against Alfred Srere

[FROM OUR REGULAR CORRESPONDENT]

Dayton, Ohio, November 12, 1928.—Suit for recovery of $3,346.84, with interest from June 25, 1928, was filed in the United States District Court at Cincinnati by the Wagner-Taylor Company, Philadelphia, Pa., insurance company, against Alfred Srere, Franklin.

The plaintiff, in its petition, states that on October 14, 1927, the defendant gave a written guaranty for payment of all premiums due on account of insurance placed on the property of the Ajax Paper Mills, Back Run, Pa., of which he was a large stockholder.

These payments, it is alleged, were to be made at the rate of $100 a week, beginning October 21, 1927, but the company avers that neither the Ajax Mills nor the defendant made any payments.

Mr. Srere is in the paper manufacturing business in Franklin.

Work of the Forest Products Laboratory in Relation to the Pulp and Paper Industry*

By C P. Winslow [1] and C. C. Heritage [2]

The United States Forest Products Laboratory is the technical organization that, as an integral part of the Forest Service of the Department of Agriculture, deals essentially with those research and development problems encountered in improving and increasing the utility of forest products. The Laboratory organization functions not only in the interests of the people in general and of the producers and consumers of forest products in particular, but also functions specifically in the interest of the Forest Service itself, which as a business organization carries the responsibilities involved in the management of one-quarter to one-third of the total standing timber of the United States.

The work of the Forest Products Laboratory relates to the interests of the Pulp and Paper Industry principally through its Pulp and Paper Section, although other sections of the Laboratory are engaged upon problems of considerable interest to this industry. The work of one of the senior technical men in the Section of Derived Products, dealing with the microstructure of wood fibers, is an excellent example. The logging and milling studies of the Section of Industrial Investigations, which involve field observations covering both the kind and the extent of the actual current utilization of representative forest tracts as they are harvested, also develop much information of interest to pulp and paper manufacturers. Studies in the field of silviculture, executed by the Section of Wood Technology, that correlate growth conditions to physical properties of the resulting timber must soon be extended to the pulp and paper-making properties as reforestation comes more and more to the fore. The design and the utility of corrugated and of solid fibre containers has long been a field of work covered by the Section of Timber Mechanics. It is hoped that some of the activities of sections other than Pulp and Paper may be presented to the membership of the Technical Association of the Pulp and Paper Industry at coming meetings, as is being done for the Section of Derived Products at this meeting.[3]

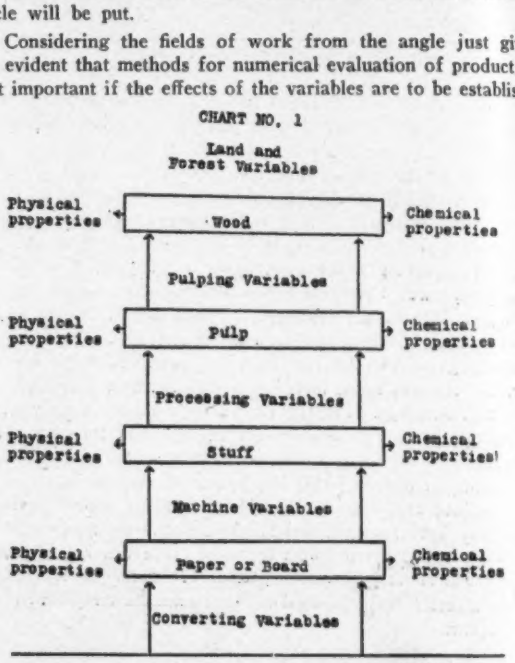
In order to visualize b:tter the various fields of technical work in the Laboratory as they relate to the Pulp and Paper Industry, refer to chart No. 1. This chart has been useful in administering the affairs of the Section of Pulp and Paper, and presumably it will assist in picturing the relation of the various fields to one another and the relation of the various papers of this symposium to one another and to the over-all field of work. Although the chart is self-explanatory, it seems permissible to emphasize several outstanding fundamentals.

1. The direction of the arrows indicates the dependence of each field of work upon the one next beneath, the whole structure standing upon the use requirements of the consumed products. These use requirements constitute the definite, tangible basis upon which the technical studies may be built. Any knowledge we may have or we may strive to gain in any of the fields comes to full fruition only as the use requirements of the consumed product are satisfied. This consumed product is in some cases the paper or board as made by the mill without conversion but in many cases it is some conversion product more or less distantly removed from the mill product.

2. Each field of work consists of three elements: A major raw or semiraw product, a series of operation variables, and a finished or semifinished product. For each product, evaluation is secured by means of the measurement of physical and chemical properties. Without the tools necessary for satisfactory measurement of such material properties, a study of the effects of the operating variables become more a manifestation of art than one of technology. The individual physical and chemical properties to be measured must be those intimately related to the use requirements. The ability to determine a variety of properties is of little or no commercial value if none are related to the actual use to which the consumed article will be put.

3. Considering the fields of work from the angle just given, it is evident that methods for numerical evaluation of product are most important if the effects of the variables are to be established

CHART NO. 1



precisely. Although a great deal of excellent investigative work relative to the effects of variables has been done without precise evaluating methods being available, this fact does not gainsay the growing necessity for more tools of precision.

The foregoing discussion must of course be interpreted with judgment and in accordance with existing circumstances for, while increasing our knowledge of the properties of paper, board, and pulp, it is quite necessary in addition to continue to produce and in so doing to meet in the best manner possible, with the methods available, the problems relating to the upper portion of the chart.

Closely related to the field of technical work are the fundamental objectives of the Section of Pulp and Paper. Stated broadly, these objectives, all of which lie in the field of applied science, are as follows:

First, increased and improved utilization of particular species, which may now be either in actual use or merely available.

Second, more nearly complete utilization of pulp wood at the mill.

Third, utilization of wastes.

These objectives call for applied research and mill-scale demonstration. Such action can obtain only to the extent that funda-

* Presented at the Fall Meeting of TAPPI, Wausau, Wis., Sept. 26, 1928.
[1] Director, U. S. Forest Products Laboratory, Madison, Wis.
[2] In Charge, Section of Pulp and Paper, U. S. Forest Products Laboratory, Madison, Wis.
[3] Ritter and Chidester, "The Microstructure of a Wood Pulp Fiber."

mental research has supplied the necessary knowledge. Hence the program of work of the Section, which is the specific course for attainment of the objectives, is divided most logically into two fields: fundamental research to build up a reserve of knowledge, and applied research and mill-scale demonstration to put that knowledge to work. The first, which arrives at the objective by covering all variables and conditions, is thorough perhaps to a fault. The second, which deliberately attempts to arrive at the objective by the route that in the light of existing knowledge seems the shortest one possible, is purposely not thorough.

The broad objectives of the Section in the applied field have been given. The secondary objectives in the fundamental field, equally important, are as follows:

First, improved methods for evaluating papers and boards relative to their use requirements, pulps and stuffs relative to commercial papers and boards, pulp woods relative to pulp, and land and forest relative to pulp wood.

Second, increased knowledge of the effects of the machine and the fiber-processing variables, of the pulping variables, and of the land and forest variables.

These objectives are summarized in chart No. 2.

CHART NO. 2
MAJOR OBJECTIVES OF THE PULP AND PAPER SECTION OF THE U. S. FOREST PRODUCTS LABORATORY

1. Fundamental work
   - A. Improved methods for evaluating:
     - a. Paper products relative to their use
     - b. Pulps and stuffs relative to paper products
     - c. Pulp woods relative to pulp
     - d. Lands and forests relative to pulp wood
   - B. Increased knowledge of the effects of:
     - a. Machine variables
     - b. Fiber-processing variables
     - c. Pulping variables
     - d. Land and forest variables
2. Applied work
   Improved and increased utilization of:
   - A. Particular species
   - B. Pulp wood at the mill
   - C. Waste

The fundamental objectives are substantially permanent and are therefore to be clearly differentiated from a program of work; the program is governed in its details by expediency factors. The program of work delineates what appear to be the most important problems, classified according to the fundamental objectives.

Such delineation can be made properly only by continued study of the changing state of technical knowledge, the trends of its course, and the interests of the United States as a whole and of the producers, the consumers, and the Forest Service in particular. To give counsel in this delineation, from the viewpoint of the industry, an advisory committee of technical men appointed through the American Paper and Pulp Association criticises constructively the current program and makes suggestions for future action.

More specifically, the relation of the Forest Products Laboratory to the Pulp and Paper Industry lies in the dissemination of the results of the work through trade journal publications, federal publications, presentation of papers, correspondence, and personal visits. In regard to the last means, the latch string is always out to the members of the Technical Association of the Pulp and Paper Industry. We personally invite each one of you to visit the Laboratory at your convenience and as often as you desire. The facilities and the experience of the Laboratory, under certain conditions, are available to you in the prosecution of your problems by means of a cooperative arrangement authorized by the Congress. The Laboratory particularly invites the opportunity to demonstrate its findings on full mill scale under this cooperative arrangement, and the establishment of industrial or association fellowships in the pulp and paper field.

The papers of the symposium are arranged on the program in the same order as the objectives, fundamental studies being placed first since these represent the bank balance upon which we may draw to finance the applied studies. By special request the papers will be given in the order of probable immediate interest but it is hoped that their relation to one another and the coherence of the program as a whole will nevertheless be evident. The papers have been chosen as typical of the various fields of work, so that a true cross section of the Section activities may be presented and so that each member of the Technical Association may find some presentation of immediate interest.

White Water Treatment

In the manufacture of chemical and mechanical pulp as well as in the production of paper and board, the resulting effluents have in the majority of mills received but scanty attention. These whitewaters invariably contain valuable fibers and solids, so that their running to waste means a material loss.

In every mill in which the loss caused by the waste of fibers and solids through the discharge of the whitewater into the river has been closely investigated, it has been found to be considerable. Had the loss been avoided it would invariably have resulted in a substantial increase of the net profits earned during the period. As a matter of fact, the waste is on such a scale that its elimination can actually convert an annual loss into a fair dividend.

Executives who have not yet devoted serious attention to this aspect of pulp and paper mill economy are likely to be surprised at the high value of the material which a simple calculation will demonstrate is allowed to slip away annually with the effluent. In some cases the loss has amounted to as much as 10 per cent of the annual production of pulp, or paper.

Many systems of fiber recovery and clarification of whitewater have been tried and most of them found wanting, by reason either of their poor efficiency, high operating cost, power or attention required, of their tendency to go out of order and other reasons.

Marx Funnel Filter

A novel recovery and clarification process, with new features, has recently been disclosed in a patent issued to Mr. R. J. Marx, London, England.

The apparatus employed in this process is composed of a series of funnels acting entirely mechanically and continuously, the structure being self contained usually of iron and steel.

Fig. 1 shows diagrammatically the operation of the process. The whitewater flows continuously in a constant volume through pipe 1 into the inlet vessel 2. It passes over the circular horizontal brim 3 of this inlet vessel in a thin sheet, falling through a relatively large distance so as to strike the umbrella-shaped impact funnel 4 divided into drops.

The impact of the drops results in bursting the tiny air bubbles which invariably surround the fibers and solids. The liberation of the air particles increases the effective specific gravity of the fibers and solids, the reduced buoyancy of which facilitates their deposition when they reach the large funnel.

The fibers and solids, freed from air bubbles are actually deposited on the umbrella-shaped impact funnel 4, whence the continuous flow washes them into the inner funnel 5. At the same time the flow is so gentle that no eddies are set up in the body of the liquid.

The filter is constantly kept full, almost up to the level of the umbrella-shaped impacting funnel. The concentrated fibers and solids are collected at the narrow end 10 of the funnel, from where they are continuously drawn off in regular volume and in a pre-determined density.

The clarified water, freed from fibers and solids, rises up between the walls of the inner funnel 5 and the outer funnel 12 to overflow in a thin film of even thickness the whole circumference of rim 6 into discharge trough 7, to which are attached outlet

pipes 8. The water so discharged can either be sent back to the mill for re-use, or led into the river. The clarification is usually such as to permit the overflow from the filter serving as fresh water in the mill.

The recovered fibers and solids, as they issue from the narrow end of funnel 10, are by gravity conducted into a collecting vessel (not shown) for immediate return to the pulp drier, paper or board machine, in constant density and volume to prevent variations in the weight of the sheet. In paper and board mills they can, if required, be returned to the beaters, or any other desired part of the plant.

By a suitable arrangement of pipes and valves the fibers and solids can be returned either direct to the pulp drying, paper or board machines, or alternatively, to the beaters or other apparatus, that is the flow can be diverted immediately by simply turning a valve, or two, from any one part of the mill to any other part. This arrangement has been found very convenient, particularly when frequent color changes are made.

The volume of recovered fibers and solids can be adjusted within wide limits by a valve at the discharge point to obtain the recovered stuff in the density in which it is required.

Such funnel filters are constructed in ten different sizes, with holding capacities ranging up to 150,000 gallons.

Mill Application

In paper and board mills the whitewater from each machine should be treated in a separate funnel filter, unless several machines produce exactly similar qualities and colors.

The size of filter best suited for any particular mill depends mainly on two factors. The first in the maximum hourly quantity of whitewater to be handled, and the second the nature of the whitewater, particularly the character of the solids suspended therein.

The second factor determines the time of retention in the filter

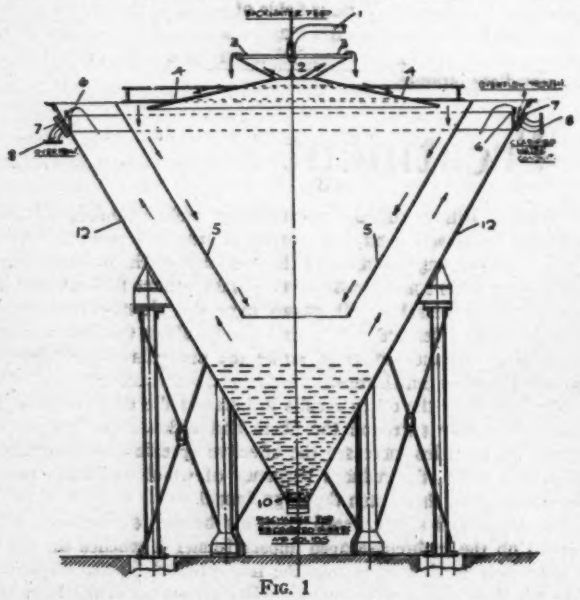


FIG. 1

required to insure the best clarification of the overflow together with the utmost recovery of fibers and solids.

Usually whitewaters need retention in the Marx patent funnel filter during one hour, to insure a recovery of 99 per cent of the mechanically depositable fibers and solids they contain, going hand in hand with a clarification of the overflow to make it thoroughly fit for use as fresh water in the mill. Some effluents, however, for example those containing a large proportion of colloidal suspensions, need a longer period of transit, but very few more than three hours.

Independent tests by water boards and other authorities have shown recoveries of fibers and solids by the filter as high as 99.8 per cent. The savings so realized frequently pay for the entire cost of the installation within a few months or less, constituting thereafter a by no means inconsiderable source of permanent profit, which was previously allowed to run to waste.

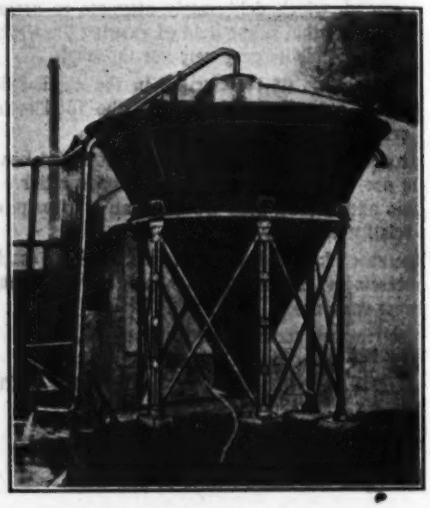


FIG. 2

The system works entirely automatically. Its operation is continuous and permanent. Any desired adjustments in the quantity of whitewater admitted, or in the volume or density of recovered fibers and solids drawn off can be effected while the apparatus is working. With the adopted design there is no possibility of slime or fibers accumulating on the surfaces, or lodging in the apparatus.

Two typical installations are shown in Figs. 2 and 3.

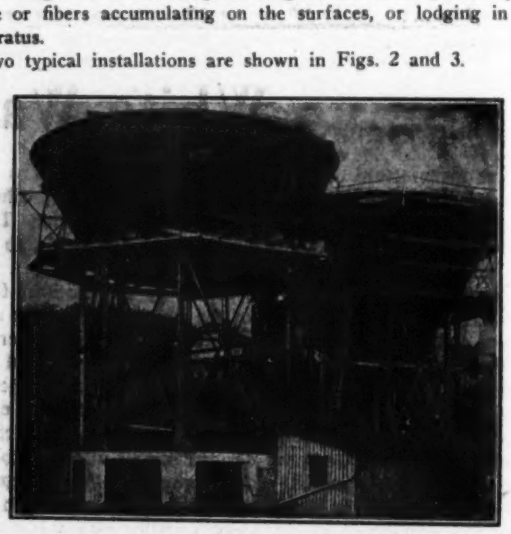


FIG. 3

It has hitherto been found difficult and sometimes even impossible to recover the fibers from the whitewater in pulp mills, more particularly in ground wood mills on account of their buoyancy, due to the very large number of fine air bubbles surrounding each fiber.

A sample of about a gallon of typical whitewater, or other effluent to be treated, makes it possible to ascertain in advance the percentage of recovery of fibers and solids, as well as the degree of clarification which will be obtained by the system in actual operation at the mill.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Edited by
THOS. J. BURKE, C. A., Sec.-Treas.

Cost Cutting Through Time Study*

Developing and Applying the Results to Secure Maximum Returns and to Avoid Future Rate Cutting

By Walter C. Hasselhorn [1]

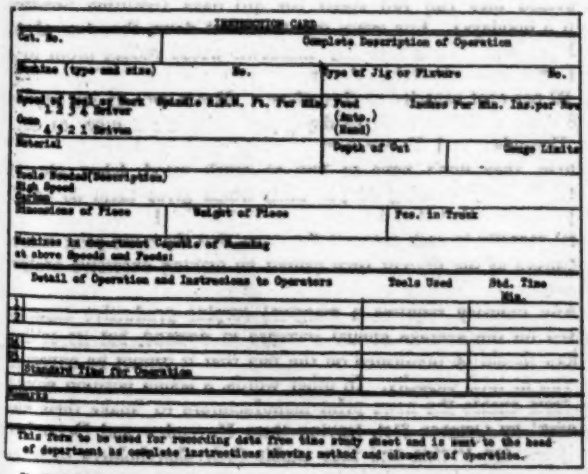
In making time studies there are two steps preliminary to applying the data for obtaining the biggest savings in manufacturing operations. The first step is investigation, or making a survey of all facts pertaining to the operation to be studied. The second, or analytical step, may be defined as the technique of operation study and evaluation. We have discussed the first step and certain factors of the analytical phrase.

Analysis must be carefully and thoroughly developed to secure the desired results in improved operation and lower costs. If superficially conducted, the returns often will not pay for the expense. But if undertaken and carried through along the lines followed by the successful plants utilizing time and motion study as sources of betterment, the savings are always worth while.

Standard Instruction Cards

Time study analysis gives a useful record, and this analyzed operation record is an excellent medium of insuring a consistent use of the ideal method. The issue of standard instruction cards to the operating and staff departments has become somewhat general practice, all data derived from the analyzed time study and any other facts concerning the operation being recorded thereon. Reference to the record each time the operation or job is set up supplies instructions outlining the ideal method, thereby preventing error, misunderstanding, decreaseed efficiency and the necessity for re-study.

* Manufacturing Industries.
[1] Supervising Engineer, Stevenson, Harrison & Jordan, Chicago.


INSTRUCTION CARD

Cat. No. | Complete Description of Operation

Machine (type and size) No. | Type of Jig or Fixture No.

Speed of Work or Work Spindle R.P.M. Ft. Per Min. | Feed (Auto.) (Hand) | Inches Per Min. Ins. per Rev.
Gears 1 2 3 4 Driver
4 3 2 1 Driven

Material | Depth of Cut | Gage Limits

Tools Needed (Description)
High Speed
Cutter

Dimensions of Piece | Weight of Piece | Pcs. in Truck

Machine in department Capable of Running at above Speeds and Feeds:

Detail of Operation and Instructions to Operators	Tools Used	Std. Time Min.
1		
2		
3		
4		
Standard Time for Operation		

This form to be used for recording data from time study sheet and is sent to the head of department as complete instructions showing method and elements of operation.

Standard instruction cards supply complete data for correct set-up and processing.

Each of these four sections deals with a peculiar system, and the engineer who makes and applies the time study supplies the necessary standards and related data and refines the plan as devised and installed by the industrial or management engineer.

The supplying of such data requires careful study, and if the basic values do not reflect the true condition, the plan or system depending upon such standards for its basis of measurement will not function properly or produce the maximum results.

Time study is most often employed as a means of determining the incentive standards to be used with wage incentive plans, and in such connection correct standards are especially necessary. When compensating by such a means for effort above normal it is essential that the basis which determines unit be correct, since the effectiveness of the incentive principle depends upon this basis.

Synchronizing Scattered Work Stations

When the operating departments of a firm employing time study methods are decentralized, or located at outlying plants, the information derived from the time study analysis provides an excellent means of comparison and standardization of methods and operation data. Reasons for variance in costs, output, schedules, machine and manual performance are made clear and the necessity for special tests and investigations is frequently eliminated when these records are carefully studied.

The time values derived from the analysis make possible a close synchronization of work stations when planning progressive lineups for assemblies or similar processing. By graphing the time standards of the original lineup and applying a means of leveling off the peaks and valleys, the "bottle necks" are eliminated and costs reduced.

By proper analysis and accurate evaluation of elements, a perfect synchronization of work stations is possible—a condition well worth while.

The Functional Phase Is Actual Application

The functional phase of time study may be defined as the application of the task standard and time study practice to the management systems of production control, methods of standardization, cost finding and wage incentive payment.

Inequitable rates create inconsistent earnings, and irregular performance is generally the consequence.

Rate Cutting Eliminated

There is no necessity for rate cutting provided the standards are correctly determined, and rate adjusting, also a poor practice, can be avoided by careful consideration of all factors pertinent to the task. Any scheme which means adjusted earnings and increased costs is contrary to the original purpose of an incentive plan, namely increased earnings and reduced costs.

Changes in operation production factors, even though of minor importance, can affect the operation time value, and one of the important duties of the standards department is the adjusting of all production standards modified by such changes as these.

When the standard is expressed as a monetary value, the adjusting of rates to agree with economic reactions requires considerable attention, and here the advantage of having the task standard expressed as a time or production value is appreciated.

Administration of Time Study Staff

The administration of the time study staff is also an important factor and much can be accomplished toward effective results by proper directing training, and supervising of the staff personnel. The supervisor is an important personage and much depends upon his understanding of time study technique, company policies, operations, products, as well as human nature.

Much importance is attached to the manner in which he trains his staff and equips them for effective work in the field, as well as to his supervision and direction of their activities so as to make the progress achieved consistent with the results desired.

The management here play an important part, and their attitude should be appreciative, co-operative, and encouraging, rather than pessimistic, unappreciative, and reactionary. Likewise a proper spirit and enthusiasm on the part of the personnel will have much to do with the successful operation of a time study department.

The Application of Time Study

Time study practice is applied to the methods section of the operating procedure in concerns whose operations are stable and whose production is predetermined and controlled, as in the steel plants and similar continuous-process industries. By improving and standardizing methods, synchronizing the work stations of the progressive processes and knowing the time values of operation and output of the various machines, a great deal is accomplished in such organizations in terms of cost reduction.

In highly competitive industries the labor cost standards established through time study provide a ready means of determining prices with which to bid for new business. These standards, plus a flexibility factor which provides for delay allowances and losses due to failure to meet standards, furnish an accurate means of supplying the data needed for such purposes.

Production standards determined by time study are invaluable in the planning of schedules, since the machine output and work station capacities thus determined, coupled with a factor to allow for flexibility and material movement, make possible accurate planning and machine loading. The production manager so equipped is in a position to determine quickly and accurately his production possibilities, requirements and work units in process.

A consistent manufacturing betterment program embracing the methods audit as herein described can be effectively applied as a means of cost reduction, and the standardizing of operations may be termed the first step. By delegating to a specialist the improvement of manufacturing methods and the mechanism of operations a gradual conversion may take place, and, with a concentrated and consistent endeavor toward ideal manufacturing procedure, automatic processing should result.

Automatic Processing

Evidence of such results may be seen at the new continuous process rolling mill of the American Rolling Mill Company at Ashland, Ky., or the automatic automobile frame manufacturing plant of the A. O. Smith Company. The latter company manufactures 7,000 complete automobile frames per day and employs but 200 men. Before the automatic methods were introduced1,100 men were employed. Similar examples can be cited of other modern and progressive manufacturing establishments, and in every case it will be found that research or similar staff functions are maintained as a means of developing automatic devices or making similar improvement in manufacturing procedure. These improvements in manufacturing methods and devices are not the results of chance happenings or a moment's thought and the plant that regards them in this light will find itself bringing up the rear in the march of progress.

Time Study a Basic Step

Time study is a basic and primary step in bringing about manufacturing betterment and economical operations, in furnishing standards and related data for management procedure, and in stabilizing labor, when it is administered with strict regard for an engineering practice involving the fundamental principles of thorough investigation, correct analysis, and proper application.

Work Days and Profit Margins

We are indebted to the News Print Service Bureau for the following information. It sums up in a very comprehensive way, the fact that our time-margin for profit-making is not large. We are always making paper but whether we are always making profits is a matter which requires our constant attention and application to ascertain. This is what news print mills are doing.

For One Year	Running Full Speed for
To pay for labor	81 days
To pay for wood	62 days
To pay for steam and power	40 days
To pay for depreciation, obsolescence, insurance and taxes, interest on bonds, etc.	34 days
To pay for administrative, selling and shipping expenses	31 days
To pay for miscellaneous materials	15 days
To pay for machine clothing	10 days
To pay for material for repairs to machinery and equipment	6 days
To make profits	31 days
Total working days	310 days
Shut down for Sundays and holidays	55 days
Total for year	365 days

In other words, the news print mills work from January 1st to November 30th, to get back the money they have actually expended for labor, materials, etc., during that time, plus what they will have to spend for these items in December, also what they will have to reserve for depreciation and obsolescence during the year. All they take in December is Profit. This means that they make about one-tenth profit on their sales or 10 per cent, provided they run full speed for 310 days (omitting Sundays and 3 holidays). For every day they shut down they lose about 1/3 per cent. Thus a 10 day shutdown would reduce profit to 7 per cent approximately. At present they are said to be running at 80 per cent capacity or thereabouts. 80 per cent of 310 days is 248 days, a difference of 62 days; just twice the number of days in December and 20 per cent of their total working days. Of course, they don't have to buy so much wood, labor, etc., if they are only running 80 per cent, which gives them 30 or 40 days margin; but it can easily be seen, that if the bases used for total capacity in each case are the same, that the news print manufacturers at the present time cannot be making excessive profits, if any.

Any industry requires a marginal surplus productive capacity based on the average annual increase in demand, but its selling prices should be predicated on the fact that it cannot be expected to run at total capacity. In other words, a sound position would at least enable the news print manufacturers to "make their expenses" by October 31st, leaving them November and December to work for Profits and thus enable their shareholders to meet the Christmas bills.—T. J. B.

How Group Bonus Aids the Superintendent

Foremen and Workmen Share in the Effort to Cut Costs Because of Their Personal Interests in the Results

By D. B. Kift [1]

When contemplating the installation of a wage payment incentive plan, the first thought is necessarily given to cost reduction in the form of more production per man-hour. This, if accomplished, not only lowers direct labor costs but lets one come nearer to obtaining maximum production per machine-hour, which is also much to be desired. Such reduction, of course, can be accomplished to a certain extent by almost any incentive plan, whether piece-work, gang piece-work, or any of the numerous so-called group bonus plans.

To my mind, however, a plan to be really effective must not only affect direct labor, as noted above, but must control indirect labor as well. To obtain the best effort from everyone concerned it must provide an incentive for supervision that is worth while, so that supervisors, foremen, assistants, etc., will feel the same keen interest in their work that they would if the business were their own.

Such a plan is the group bonus plan in successful operation in the Edison Electric Appliance Company factories for a number of years. Out of my experience with this I would like to bring out a point that is often overlooked when installing wage incentive plans, and that is the aid our bonus plan has given me, the superintendent. To my mind, such a positive incentive lets me obtain the best possible results through the foremen and their assistants. The tactics of the old fashioned superintendent, who depended almost entirely upon his ability to instill fear in the employees to obtain results, are unnecessary. With a fair and equitable wage payment plan, employees are paid commensurate with their ability. This always means satisfied employees.

If anyone wonders just how any kind of wage incentive plan in the factory changes conditions so far as the superintendent's job is concerned, I will say, first of all, that I am not referring to a superintendent's personal bonus, although being on bonus myself I can vouch for the fact that it has the same beneficial effect on an executive that it has on factory supervision.

Our bonus plan helps me greatly because it permits me to receive, with practically no expense, a detailed report from each group showing their bonus standing at closing time the previous day. As the bonus percentage is a cost barometer, I can tell at a glance what group is in trouble. If their bonus is below what I consider a satisfactory figure, taking into consideration conditions as I know them to be at the time, the assistant superintendent and foremen concerned are called into my office and we go into the matter to see what has happened.

I obtain this information, which means that my costs are going up, the day after trouble shows up. Compare this with the usual method of obtaining information through the average cost department and you will quickly see that instead of perusing reports showing ancient history, we get control of the siutation so early that, in most cases, we can apply an immediate remedy, thereby avoiding losses and high cost.

Daily Records Facilitate Accurate Planning

Another valuable effect of this report is that the foreman furnishing it to the superintendent daily is forced to keep a record of "allowed" and "taken" hours each day. Therefore he knows how his department costs stand at all times and is able to plan his work more carefully.

Our bonus plan also lets me receive in my office weekly a report showing the number of bonus units delivered from each group or department. These figures are noted on charts which carry a record of production required. This shows at once if each department is delivering a total equal to requirements. By checking these parts with bonus percentage earnings I can tell at a glance if a foreman has too much or not enough direct labor. If the chart shows that deliveries are not up to requirements but bonus percentage is normal or above, then more help should be employed, or if the condition is temporary, overtime should be resorted to. If the charts show deliveries exceeding requirements, then help is either transferred to another group, hours are shortened, or help not up to standard is dismissed.

The Foreman's Responsibility

Our bonus plan permits the maintenance, in most cases, of a record of each employees work. This is done with very little effort on the part of the foreman. This record, which is checked daily, shows the foremen which employees are not producing as they should. They can then be speeded up before much damage to the department bonus is done. Recommendations for increase in hourly rates also are based on these records.

The fact that each foreman each day is obliged to check the details mentioned relieves the superintendent of considerable work and worry. Every foreman knows that he cannot overlook these details a single day, for if he does, the reports coming to the office will show an unsatisfactory condition. He also is fully aware of the fact, that his personal bonus depends upon his continual checking of everything entering into cost of production in his department.

Employees Suggest Many Savings

Just as soon as a foreman receives his work orders or, as we call them, his rate sheets, he immediately checks to see how many man-hours are involved. This can be done in a couple of hours in any department, due to our simple method of figuring bonus units. He can then plan his work far enough ahead to permit him to increase or decrease his force as necessary. This relieves the superintendent of this phase of the labor and production problem to a very great extent. A foreman seldom tries to hire too much help or is excessive in his requests for wage increases, as too much help would eventually cause considerable trouble due to lack of work, and an increase in the average hourly rates reduces his own income materially. Nor will a foreman use a man on a boy's or girl's job, for a decreased hourly rate increases his personal income.

Due to the effect that improved methods and more efficient equipment have on a foreman's bonus, new ideas are continually brought to me for consideration. If it were not for his valuable part of the bonus plan I am afraid that we would have to depend entirely upon cost reductions worked out either way by myself or by men employed for this particular purpose, and we, of course, could not be expected to bring to light all the little things that a foreman gathers through his experience on a particular class of work.

Worker's Interest Increased

Now that our factories are on bonus 100 per cent, when I am away from the plant for any cause I have a feeling that everybody is doing his best just the same as he would be if I were on the job. This, to my mind, is a very important feature.

We all like to think that most employees work hard for us because our company is a good company to work for and to a certain extent that is a fact, but we must admit that one of the main reasons why it is a good company to work for is because our wage incentive plan is satisfactory to everyone concerned.

COST SECTION

[*] Manufacturing Industries.
[1] General Supt., Edison Electric Appliance Co.

Increasing Actual Selling Time of Salesman

The Dennison Manufacturing Company of Framingham, Mass. seeks to increase the actual time spent by its salesmen in the presence of the customer. On the basis of time studies, the company determined that the actual time spent by its average salesman in the presence of the customer was about 15 per cent of his total working time. The balance was spent as follows:—

Travelling	40 per cent
Waiting	20 per cent
Clerical & Miscellaneous	25 per cent

It seemed evident that if the percentage of time devoted to non-selling work could be reduced and the advantage added to the time spent in actual selling, the company ought to get a better yield of sales. To determine to what degree non-selling work could be reduced and actual selling time increased, two selling districts were selected as experimental fields. One was a city district and the other a typical country district covered by travelling salesmen.

Travelling seemed to offer the best opportunity for making savings. The study showed that salesmen canvassed unsystematically, both in respect to the territory they covered and the times at which they called on their prospects and customers. The guiding principle seemed to be a "hunch" that there might be an order in a certain place, and as a result they passed up calls on the way to act upon the "hunch." If, therefore, a salesman's work could be planned first to make as few jumps as possible and, second, to call only in those places where presumably, the time of purchase was near at hand, the 40 per cent devoted to travelling could be reduced and the chances of securing orders instead.

Before such a plan could be worked out satisfactorily, the company had to have definite information as to who and where its prospects were and what were the logical times or seasons for purchase. In other words, the company had to have accurate, up-to-date records upon which to base its selling plans.

Considerable thought and study were given to the development of a satisfactory set of customer and prospect records showing sales and lost orders, both for its "C" trades (those who buy its merchandise to use) and also for "B" trades (those who buy for resale purposes). To insure the maintenance of such records, it was found necessary to insist that the salesmen make a report of each call, something which they had never done before.

Various sources have been employed in building up a list of prospects, such as trade directories, telephone directories, purchased lists, and by door-to-door canvass. So far the door-to-door canvass has seemed to yield the best results.

Another big part of non-selling time was that devoted to clerical work, which consisted of making out reports and sales records, writing orders and other details which every salesman had to take care of. Here again it was found that if any part of the work could be transferred from the salesman to a clerk, the company could, presumably, increase the time for actual selling. In the two experimental districts, arrangements were made for clerks to keep all sales records formerly kept by salesmen.

A check-up made about a year after the introduction of this application of planning to the salesmen's work showed that the time the salesmen devoted to actual selling was increased from an average of 15 per cent to an average of 25 per cent to 30 per cent of total working time.

Co-operative Dealer Relations

Another paper manufacturing company holds conventions for its merchants every year. At the last convention various merchandising problems and difficulties were discussed as well as developments in the service department, methods of following mill advertising, ways of getting plant salesmen to sell more paper, plans of conducting sales meetings, and tie-ups with local advertisers.

The salesmen of this company travel the country with sample numbers and motion pictures, and meet the salesmen of the company's jobbers in groups. The company has not provided any instruction material, or a correspondence course, but it does furnish to all of the salesmen of its jobbers an advance duplicate of all the direct-by-mail advertising that it sends out.

In addition, there is a sales promotion department at the plant. It has had in the last five years some 2,000 or 3,000 salesmen, printers, and advertising men come to the plant and stay from one to four days, at the company's expense, showing them how it manufacturers paper and the practical reasons why a buyer of its papers gets a big return on his investment.

In the way of selling helps, the direct-by-mail samples of paper, showing how different businesses may be advertised, are sent to merchants, to their salesmen, and to a mailing list of some 30,000 printers, advertisers and users of papers. The company furnishes its agents with a complete sample cabinet of all the papers it makes, so that they may have samples to send out to printers and users, and samples from which they can make up dummies in particular cases.

Complete Analysis of Every Dealer

The company makes a complete analysis of every dealer, his sales of its papers and how these sales compare with sales in previous years. The company also has the dealer's price lists and knows what other papers he sells and whether the lines he carries are competitive. On the first of every year it sends him a complete analysis of his purchases from the company on all the different lines for the last five years. The company has no quantity discounts or special credit terms. Its jobbers are not jobbers in the usual sense, but sell to the printer.*

To Be Gen. Mgr. of Rhinelander Paper Co.

RHINELANDER, Wis., November 5, 1928.—The board of directors of the Rhinelander Paper Company last week unanimously elected Folke Becker general manager and treasurer of the company to succeed William Eibel, who tendered his resignation.

Folke Becker has been general superintendent of the Rhinelander Paper Company for the past three years. Prior to coming to Rhinelander he was general manager of the Westfield River Paper Company, of Russell, Mass. Practically all of his life has been devoted to the manufacture of glassine and greaseproof.

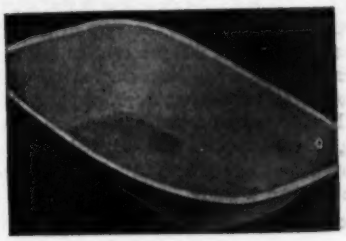
On January 1, 1926, Mr. Becker came to Rhinelander to accept the general superintendency, and Mr. Eibel the general managership of the company. The plan behind this movement was to give Mr. Becker sufficient time to re-vamp the physical equipment of the Rhinelander Paper Company. Under his direction during the past three years the latest and most modern machinery has been installed for the production of high grade glassine and greaseproof. The outstanding installation among these improvements was a 140-inch glassine machine of the most up-to-date design. This program of improvements is now completed and Mr. Eibel's resignation followed. Mr. Eibel is leaving for the Pacific Coast shortly to take up new duties there.

Mr. Becker's successor as superintendent is Lewis Dozier, formerly with Westfield River Paper Company and the Warren Manufacturing Company.

The company recently opened an office in Chicago to take care of the increasing demand of its well known product. R. A. Wesley, formerly of the Menasha Printing and Carton Company, is in charge of this office. The general sales office is at the mill under the direction of John A. Wesley, sales manager.

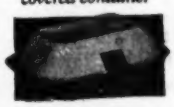
* Metropolitan Life Ins. Company's Bulletin.

Get your share



of the increased market for Paprus Butter Dishes. These dishes are absolutely waterproof—hold their shape like wood—sell for less than paper! They are moulded from pulp in one piece. No folds—no staples. White, sanitary, attractive. More and more dealers are using them. Let them build business for you.

Paprus Dishes used as covered container



PAPRUS DISHES

KEYES FIBRE COMPANY, INC.
General Sales Offices: GRAYBAR BLDG., NEW YORK
Factory: Waterville, Maine. JOHN M. HART COMPANY, *Manager of Sales*

BROWN COMPANY'S ALPHA GRADES

of Purified Cellulose Fibre representing some of the valuable results of our many years of research in cellulose chemistry.

SUPER ALPHA

for strength in Tear, Fold and Mullen. Super Alpha equals the higher grades of rags in the manufacture of fine papers.

EASY-BEATING ALPHA

This is a grade developed for mills of limited beating capacity. While not giving results equal to Super Alpha, it produces wonderful paper on short beating.

REGULAR ALPHA

This is a grade midway between Super and Easy-Beating.

Use ALPHA for Quality

BROWN COMPANY Portland, Maine

SHENANGO-PENN

Centrifugally Cast ROLL SLEEVES

Shenango-Penn Roll Sleeves are produced from the highest grade bronze alloys especially selected for paper mill rolls and this combined with the advantages of our centrifugal casting method results in a dense close grained cylinder surface in every way superior to ordinary bronze casting methods.

For special straight or crowned surface finishes extreme accuracy of work is assured by modern roll grinders.

No matter whether you require bronze covers shrunk or pressed on solid cast iron bodies or spider shafts complete, or new bronze covers for old rolls, this Company can serve you promptly and efficiently.

Let us cooperate with you.

Shenango-Penn Mold Company
Oliver Building
Pittsburgh, Pa.

Works at Dover, Ohio and Sharpsville, Pa.

BRONZE

FIXING BLAME FOR THE NEWS PRINT SITUATION

(*Continued from page 15*)

purchased the old Port Mellon plant, plans to install a lumber mill with a producing capacity of 200,000 feet a day, and a pulp plant of 200 tons capacity. The first unit of the pulp plant will have a 100-ton output.

No Mill Planned for Labrador

An official of the International Paper Company in Montreal last week announced that his company has not at present under consideration any development in Labrador, and that no negotiations have been entered into with the Newfoundland government to that end. The official could not state whether or not the International would, at any future date, look into the matter of entering Labrador with a view to operating there, but he said that no cruises or surveys had been attempted there by his company.

Opposition to International Co.'s Plan

Permission to construct a barrage at Lake Squatteck, Temiscouata, will not be accorded the International Paper Company by the Quebec Government if such a project involves the submersion of the surrounding parish. Such was the substance of the replies of Premier Taschereau and the ministers of the interested departments, the Hon. J. E. Perrault, Minister of Colonization, Mines and Fisheries, and Hon. Honore Mercier, Minister of Lands and Forests, when an imposing delegation, headed by Mgr. Georges Sourchesne, waited on the Cabinet to petition against the according of permission.

Two barrages or dams are projected by the International, one at Lake Temiscouata and the other at Lake Squatteck.

Price Bros.' New Office Building

Price Bros. & Co. is to erect a $600,000, 15 story building in Quebec to house all its employees in that city. Tentative plans have already been drawn up for the building, which will face the City Hall. It is expected to be ready for occupancy in 1930. Ross and Macdonald, of Montreal, are the architects. The new building will house the head office staff of Price Bros. & Co., and the Donnacona Paper Company, now a subsidiary of Price Bros.

Tidal Water Project Before Government

The plans of the Canadian Dexter P. Cooper Company, which envisage the harnessing of the tides in the Bay of Fundy by the construction of dams in Passamaquoddy Bay and thus developing from half a million to 700,000 horsepower, are being closely examined by experts of the Federal Government. The plans were filed with the Department of Public Works a few weeks ago, but since then considerable objection has been taken to them by representatives of the fishing industry. It has been advanced that such a development would destroy the sardine fisheries of Passamaquoddy Bay, and that the haddock and pollock fishery would also be seriously affected. It is thought that some modification of the plans will be required before permission to proceed with the project can be secured.

The scheme, which calls for an expenditure of $75,000,000, is comparable to the huge power development at Niagara Falls in its magnitude.

To Make Trees Grow Faster

With knowledge of the extensive and favorable work done in other countries and having considerable areas of suppressed spruce in swamp or muskeg types on their limits, Mr. H. B. Schanche, manager of the woods department of the Abitibi Power and Paper Company, Limited, Iroquois Falls, Ontario, decided to carry on certain experiments to ascertain what the results would be upon the growth of trees or draining swamp areas in that district, and ditches were dug in 1922, draining certain areas, on which careful data has been kept and with most remarkable results.

In the first year after drainage, little difference in rate of growth was noted. In the second year the rate of growth in diameter increased up to 200 per cent. In the following years and up to the present or sixth year, the rate of growth has annually shown an increase of from 300 per cent to 500 per cent.

The experiment, which has been carried on exclusively by the Abitibi Company, is considered a pronounced success, and the company is about to launch a similar research project on a much broader scale, where complete and detailed data can be collected on the thousand and one phases which will present themselves in the course of such a study.

It would seem from such very general observations that have been made to date that this project may possibly in due course show definitely the economy of adapting this form of soil treatment to vast areas in the northern parts of Ontario and Quebec, which are now either totally unproductive as muskegs or at best support only a more or less stunted and exceedingly slow-growing stand of timber, much of which cannot in the ordinary course of events be merchantable for an indefinite period.

Pulp and Paper Association's Annual Meeting

The Sixteenth Annual Meeting of the Canadian Pulp and Paper Association will be held at the headquarters of the Association, 3420 University street, Montreal, on Friday, January 25th, at 10 o'clock in the forenoon.

Immediately following the business meeting the inauguration of the new Pulp and Paper Research Institute will take place, with appropriate addresses by special speakers invited for the occasion. At the conclusion of these exercises a buffet luncheon will be served, after which the members will be invited to inspect the new building under the direction of experienced guides.

On Friday evening the annual president's dinner will be held at the Ritz-Carlton Hotel, invitations thereto being confined to the executives of the company members and a limited number of special guests.

Prior to the annual meeting of the association proper there will be meetings of the Technical and Woodlands Sections.

Indianapolis Business Improving

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., November 12, 1928.—Now that the election is over, the local paper trade is expecting a continuance of business and incidentally a little improvement. However, there is not much about which to complain with the October volume and this month is starting out in good shape. Demand for fine papers is improving. The retail stores have begun preparing for their holiday advertising, much of which will be direct by mail and the reaction on the local trade has been promising. Business with these lines is expected to improve sharply from now until a week before Christmas, when it will begin to sag.

The printing industry is buying from hand to mouth and has very little stocks on hand. This necessitates more ordering and judging from the increasing individual orders, the printers are having a good fall and early winter business.

A good demand continues for glassine products from the confectionery and similar trades. The box manufacturers also are good customers at the present time.

Little change is seen in demand for prepared building papers, but at this time in the year there generally is a slump and the dealers are prepared for it.

An improvement in the demand for news print is noted. The larger dailies of the state are reporting increased business, some of it due to the election, but most of it due to better business conditions.

The paper stock market shows little change. There are not many offerings to the plants as compared with last year, but the market seems well stabilized.

BOLTON QUALITY

JOHN W. BOLTON & SONS, INC.

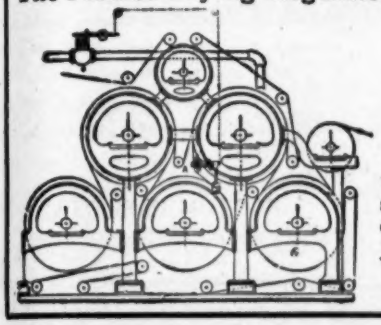
EAGLE KNIFE & BAR WORKS

Lawrence, Mass.

The only firm making KNIVES for every machine from wood pile to finishing room.

It's the KNIVES that do the work!

The Pickles Drying Regulator



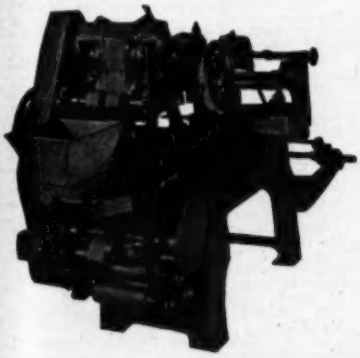
WE ARE SAFE IN OUR PROPOSITION

YOU'LL MAKE NO MISTAKE IN ACCEPTING IT

Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

W. F. PICKLES **Buckland, Conn.**



HIGHEST SPEED

Paper Bag Machinery

Get My Quotations Before Placing Your Orders

Special Machinery Designed and Built

A. L. PARRISH

1702 Robinson St., South Bend, Ind.

Cotton and Paper Rolls
Super Calenders
Friction Calenders
Embossing Calenders
Hydraulic Presses and Pumps

Successors to the Granger Foundry & Machine Co.

The Textile-Finishing Machinery Company

PROVIDENCE, R. I.

Imports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING NOVEMBER 10, 1928

SUMMARY

Cigarette Paper	1,929 cs.
Wall paper	15 bls.
Paper hangings	86 bls., 1 cs.
News print	4,052 rolls
Printing paper	67 rolls, 117 bls., 42 cs.
Wrapping paper	18 bls.
Packing paper	5 cs.
Writing paper	6 cs.
Decalcomania paper	27 cs.
Tissue paper	71 cs.
Parchment paper	28 bls.
Cover paper	3 cs.
Colored paper	47 cs.
Stencil paper, etc.	70 cs.
Filter paper	11 cs.
Drawing paper	40 cs.
Metal coated paper	6 cs.
Surface coated paper	12 cs.
Gold coated paper	5 cs.
Photo paper	1 cs.
Sulphate paper	429 rolls
Condenser paper	7 cs.
Straw board	484 rolls
Miscellaneous paper	285 cs.

CIGARETTE PAPER

American Tobacco Co., Sarcoxie, Bordeaux, 1,000 cs.

De Manduit Paper Corp., Sarcoxie, Bordeaux, 869 cs.

British American Tobacco Co., Homeric, Southampton, 60 cs.

WALL PAPER

F. J. Emmerich, Baltic, Liverpool, 13 bls.

F. J. Emmerich, Minnesota, London, 1 ble.

F. J. Emmerich, Homeric, Southampton, 1 ble.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., Baltic, Liverpool, 67 bls.

A. C. Dodman, Jr., Inc., Scythia, Liverpool, 19 bls.

Whiting & Patterson Co., Inc., Homeric, Southampton, 1 cs .

NEWS PRINT

Parsons & Whittemore, Inc., Muenchen, Bremen, 130 rolls.

Perkins Goodwin Co., Muenchen, Bremen, 661 rolls.

New York Telegram, Cornerbrook, Cornerbrook, 2,665 rolls.

Brooklyn News, Cornerbrook, Cornerbrook, 378 rolls.

Clinton Paper Co., Cornerbrook, Cornerbrook, 181 rolls.

Hudson Trading Co., Bergensfjord, Oslo, 37 rolls.

PRINTING PAPER

Perkins Goodwin & Co., Hamburg, Hamburg, 13 cs.

E. Dietzgen & Co., Hamburg, Hamburg, 2 cs.

Keuffel & Esser Co., Hamburg, Hamburg, 26 cs., 67 rolls.

National City Bank, Hamburg, Hamburg, 117 bls.

Oxford University Press, Scythia, Liverpool 1 cs.

WRAPPING PAPER

Blauvelt Wiley Paper Manfg. Co., Caledonia, Glasgow, 18 bls.

PACKING PAPER

International F'd'g. Co., Hamburg, Hamburg, 5 cs.

WRITING PAPER

F. L. Kramer & Co., American Farmer, London, 6 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Baltic, Liverpool, 16 cs. (duplex).

B. F. Drakenfeld & Co., Baltic, Liverpool, 11 cs. (simplex).

TISSUE PAPER

B. F. Drakenfeld & Co., Baltic, Liverpool, 4 cs.

Old Master Paper & Pulp Co., Hamburg, Hamburg, 57 cs.

F. B. Vandegrift & Co., Scythia, Liverpool, 7 cs.

Meadows Wye & Co., Scythia, Liverpool, 3 cs.

PARCHMENT PAPER

Walker Goulard Plehn Co., Hamburg, Hamburg, 28 bls.

COVER PAPER

International F'd'g. Co., Hamburg, Hamburg, 3 cs.

COLORED PAPER

E. Dietzgen & Co., Hamburg, Hamburg, 47 cs.

STENCIL PAPER, ETC.

Arlac Dry Stencil Co., Hamburg, Hamburg, 70 cs.

FILTER PAPER

H. Reeve Angel Co., Inc., Carmania, London, 11 cs.

DRAWING PAPER

Keuffel & Esser Co., Hamburg, Hamburg, 40 cs.

METAL COATED PAPER

Universal Car Loading Co., Hamburg, Hamburg, 6 cs.

SURFACE COATED PAPER

Quality Art Novelty Co., Hamburg, Hamburg, 12 cs.

GOLD COATED PAPER

F. Murray Hill Co., Muenchen, Bremen, 5 cs.

PHOTO PAPER

J. J. Gavin & Co., Scythia, Liverpool, 1cs.

SULPHATE PAPER

Insight Paper Co., Bergensfjord, Oslo, 429 rolls.

CONDENSER PAPER

Globe Shipping Co., Ryndam, Rotterdam, 7 cs.

STRAW BOARD

Perkins Goodwin & Co., Ryndam, Rotterdam, 324 rolls.

N. Y. Corrugated Carton Co., Ryndam, Rotterdam, 94 rolls.

A. Vuyk, Ryndam, Rotterdam, 66 rolls.

MISCELLANEOUS PAPER

International F'd'g. Co., Ryndam, Rotterdam, 24 cs.

Globe Shipping Co., Ryndam, Rotterdam, 53 cs.

W. L. Haas, Ryndam, Rotterdam, 14 cs.

Standard Products Corp., Lapland, Antwerp, 2 cs.

Birn & Wachenheim, Lapland, Antwerp, 34 cs.

P. C. Zuhlke, Lapland, Antwerp, 65 cs.

Borden Riley Paper Co., Lapland, Antwerp, 4 cs.

Gevaert Co. of America, Lapland, Antwerp, 89 cs.

RAGS, BAGGINGS, ETC.

J. Cohen & Son, Baltic, Liverpool, 88 bls. rags.

E. J. Keller Co., Inc., Bankdale, ——, 164 bls. rags.

W. Schall & Co., Ryndam, Rotterdam, 154 bls. bagging.

Castle & Overton, Inc., Ryndam, Rotterdam, 390 bls. bagging.

Castle & Overton, Inc., Ryndam, Rotterdam, 9 bls. rags.

American Exchange Irving Trust Co., Ryndam, Rotterdam, 69 bls. rags.

National City Bank, Hamburg, Hamburg, 16 bls. rags.

State Bank & Trust Co., Hamburg, Hamburg, 41 bls. rags.

E. J. Keller Co., Inc., Hamburg, ——, 9 bls. linen threads.

Interstate Trust Co., Muenchen, Bremen, 110 bls. rags.

E. J. Keller Co., Inc., Anaconda, ——, 106 bls. rags.

Castle & Overton, Inc., Anaconda, Rotterdam, 162 bls. rags.

C. Belsky, Anaconda, Rotterdam, 48 bls. rags.

A. W. Fenton, Inc., Anaconda, Rotterdam, 39 bls. rags.

Castle & Overton, Inc., Mercier, Antwerp, 162 bls. rags.

Bank of The Manhattan Co., Mercier, Antwerp, 112 bls. bagging.

Standard Bank of South Africa, Mercier, Antwerp. 300 bls. cotton waste.

Chemical National Bank, Mercier, Antwerp, 86 bls. rags.

E. J. Keller Co., Inc., Mercier, ——, 60 bls. rags.

P. Berlowitz, Sarcoxie, St. Nazaire, 161 bls. rags.

Salomon Bros. & Co., Sarcoxie, St. Nazarie, 62 bls. rags.

C. B. Richard & Co., Exeter City, Bristol, 90 bls. bagging.

J. Cohen & Son, Caledonia, Glasgow, 6 bls. paper stock.

Bank of The Manhattan Co., Alesia, Alexandria, 85 bls. bagging.

Bank of The Manhattan Co., Alesia, Alexandria, 8 bls. rags.

E. J. Keller Co., Inc., Alesia, ——, 150 bls. rags.

S. Birkenstein & Son, Cabo Villano Santander, 45 bls. rags.

Union Bank & Trust Co., Cabo Villano, Bilbao, 148 bls. rags.

Ellermans' Wilson Line, Francisco, Hull, 63 bls. rags.

E. J. Keller Co., Inc., Pipestone County, ——, 116 bls. rags.

Overton & Co., Pipestone County, Dunkirk, 150 bls. bagging.

W. Steck & Co., Pipestone County, Dunkirk, 55 bls. rags.

V. Galaup, Pipestone County, Havre, 194 bls. rags.

Salomon Bros. & Co., Pipestone County, Havre, 36 bls. rags.

Darmstadt Scott & Courtney, Pipestone County, Havre, 8 bls. rags.

Castle & Overton, Inc., Anna C., Italy, 14 bls. rags.

Castle & Overton, Inc., Helen, Spain, 186 bls. rags.

OLD ROPE

W. Schall & Co., Hellen, Barcelona, 139 bls.

Brown Bros. & Co., Ryndam, Rotterdam, 125 coils.

Brown Bros. & Co., Muenchen, Bremen, 75 coils.

Brown Bros. & Co., Exeter City, Bristol, 97 coils.

H. Miller, Cristobal, Cristobal, 91 bls.

Castle & Overton, Inc., Balsam, Glasgow, 97 coils.

CASEIN

Kalbfleisch Corp., So. Cross, B. Ayres, 667 bags.

Champion Coated Paper Co., So. Cross, B. Ayres, 895 bags.

WOOD PULP

Perkins Goodwin & Co., Mexicano, Oslo, 125 bls. sulphite.

J. Andersen & Co., Mexicano, Greaker, 2,660 bls. sulphite.

E. J. Keller Co., Inc., Hamburg, ——, 1,357 bls. wood pulp 208 tons.

O. E. Kiaer, Bergensfjord, Greaker, 500 bls. sulphite.

Atterbury Bros., Inc., Bergensfjord, Oslo, 750 bls. wood pulp.

E. J. Keller Co., Inc., Bergensfjord, ——, 400 bls. sulphite.

Chemical National Bank, Bergensfjord, Oslo, 660 bls. sulphite.

Perkins Goodwin & Co., Bird City, Obbola, 2,800 bls. sulphite.

Polaris Shipping Co., Dampfire, Sonora, 1,203 cords wood pulp.

BOSTON IMPORTS

WEEK ENDING NOVEMBER 10, 1928

True & McClelland, Anaconda, Rotterdam, 342 bls. rags.

1st National Bank of Boston, Anaconda, Rotterdam, 200 bags casein 10,000 ks.

Green Hamilton Co., Anaconda, Rotterdam, 155 bls. cotton waste.

Castle & Overton, Inc., Anaconda, Rotterdam, 90 bls. rags.

2nd National Bank, Anaconda, Rotterdam, 101 bls. rags.

C. H. Powell & Co., Anaconda, Rotterdam, 583 rolls straw boards.

Brown Bros. & Co., Francisco, Hull, 192 bls. old rope.

1st National Bank of Boston, Pipestone County, Havre, 167 bags casein 10,024 ks.

W. Schall & Co., Pipestone County, Havre, 491 bls. bagging.

Robert Blank, Pipestone County, Havre, 100 bls. rags.

Bank of Commerce & Trust Co., Pipestone County, Havre, 29 bls. rags.

Mystic Waste Co., Pipestone County, Havre, 12 bls. rags.

A. Bloch & Co., Pipestone County, Havre, 56 bls. new cuttings.

A. Bloch & Co., Pipestone County, Havre, 111 bls. string waste.

A. Bloch & Co., Pipestone County, Havre, 104 bls old rope.

P. H. Graham Son & Co., Pipestone County, Havre, 14 bls. rags.

Dominion Bank, Pipestone County, Havre, 11 bls. rags.

Bird & Son, Pipestone County, Havre, 589 bls. rags.

Ayres, W. C., Jones Co., Pipestone County, Havre 14 bls cotton waste.

V. Galaup, Pipestone County, Havre, 202 bls. rags.

D. M. Hicks, Inc., Pipestone County, Havre, 55 bls. rags.

D. M. Hicks, Inc., Pipestone County, Havre, 25 bls. new cuttings.

NEWPORT NEWS IMPORTS

WEEK ENDING NOVEMBER 10, 1928

Norfolk Times, Cornerbrook, Cornerbrook, 3,878 rolls news print.

Norfolk Leader, Cornerbrook, Cornerbrook, 1,240 rolls news print.

Castle & Overton, Inc., Bilderdyk, Holland, 1,348 bls. wood pulp.

(*Continued on page 60*)

For reliable running and average long life

LINDSAY FOURDRINIER WIRES

are unsurpassed

We make them for the largest and fastest machines.

Cylinder Wires All Sizes

The Lindsay Wire Weaving Co.

Collinwood Sta. CLEVELAND, OHIO

INTERNATIONAL ACCEPTANCE BANK
INCORPORATED

International Banking Transactions

Commercial Letters of Credit
Collections Foreign Exchange
Investment Securities
Bullion and Currency

PAUL M. WARBURG, *Chairman* F. ABBOT GOODHUE, *President*

52 Cedar Street, New York

Prompt deliveries made from stocks in
NEW YORK
BOSTON
PHILADELPHIA
CHICAGO

TRADE MARK

Clear the decks for good business

Business has passed the summer doldrums . . . active times are ahead. Experienced executives, in planning production, are paying attention to dyestuffs.

Heller & Merz Colors meet modern production requirements. They are quality dyestuffs which justify the confidence placed in them by leading manufacturers.

Heller & Merz service, second to none, has stood the test 60 years. Ask any of our customers!

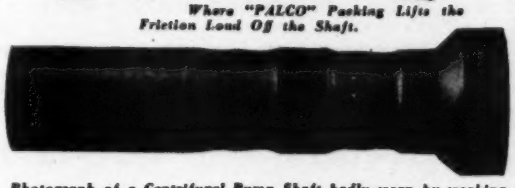
The HELLER & MERZ COMPANY
505 Hudson St., New York

Boston 287 Atlantic Ave. | Chicago 146 W. Kinzie St. | Philadelphia 114 Market St.

Springfield, Mass. 24 Lester Street

Factory—NEWARK, N. J.

Where "PALCO" Packing Lifts the Friction Load Off the Shaft.



Photograph of a Centrifugal Pump Shaft badly worn by working against flax packing which did not carry sufficient lubricant to prevent friction.

CUTNO PACKING

For pumps handling caustic soda and similar chemicals. Its lubricant can be relied upon to resist the cutting action of these chemicals, and to keep the pump shaft so perfectly lubricated as to avoid friction. To prove our claims let us send you a free working sample to test under your own conditions.

GREENE, TWEED & CO.
Sole Manufacturers
109 Duane St., New York

Imports of Paper and Paper Stock

(*Continued from page 58*)

BALTIMORE IMPORTS

WEEK ENDING NOVEMBER 10, 1928

Congoleum Nairn Co., Sarcoxie, Bordeaux, 759 bls. rags.
E. J. Keller Co., Inc., Hannover, ——, 337 bls. wood pulp.
Castle & Overton, Inc., Bilderdyk, Holland, 900 bls. wood pulp.
Castle & Overton, Inc., Eupatoria, Germany, 795 bls. wood pulp.

NORFOLK IMPORTS

WEEK ENDING NOVEMBER 10, 1928

Castle & Overton, Inc., Eupatoria, Germany, 187 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING NOVEMBER 10, 1928

E. J. Keller Co., Inc., Bankdale, Algiers, 99 bls. rags.
Chase National Bank, Anaconda, Rotterdam, 485 bls. rags.
Castle & Overton, Inc, Anaconda, Rotterdam, 710 bls. rags.
J. A. Steer & Co., Anaconda, Rotterdam, 189 bls. rags.
Castle & Overton, Inc., Sarcoxie, Bordeaux, 231 bls. rags.
A. W. Fenton, Inc., Sarcoxie, Bordeaux, 261 bls. rags.
V. Galaup, Sarcoxie, Bordeaux, 127 bls. rags.
V. Galaup, Sarcoxie, St. Nazaire, 307 bls. rags.
Castle & Overton, Inc., Sarcoxie, St. Nazaire, 196 bls. rags.
P. Berlowitz, Sarcoxie, St. Nazaire, 126 bls. rags.
Salomon Bros. & Co., Sarcoxie, St. Nazaire, 109 bls. rags.
E. J. Keller Co., Inc., Sarcoxie, ——, 136 bls. rags.
C. B. Richard & Co., Exeter City, Bristol, 134 bls. rags.
J. A. Steer & Co., Exeter City, Bristol, 161 coils old rope.
Union Clay Mines Corp., Exeter City, Bristol, 120 bags china clay.
J. A. Steer & Co., Exeter City, Bristol, 180 bls. waste paper.
Perkins Goodwin & Co., Bird City, Obbola, 3,500 bls. sulphate 500 tons.
G. W. Millar & Co., Cabo Villano Bilbao, 23 bls. rags.
E. A. Stone & Co., Cabo Villano Bilbao, 51 bls. rags.
V. Galaup, Pipestone County, Dunkirk, 46 bls. rags.
Katzenstein & Keene, Inc., Pipestone County, Dunkirk, 243 bls. rags.
J. H. Faunce, Pipestone County, Havre, 1 cs. wall paper.
N. E. Berzen, Pipestone County, Havre, 70 bls. old rope.
V. Galaup, Pipestone County, Havre, 554 bls. rags.
Salomon Bros. & Co., Pipestone County, Havre, 438 bls. rags.
A. Hurst & Co., Pipestone County, Havre, 83 bls. rags.
Salomon Bros. & Co., Pipestone County, Havre, 269 bls. rags.
D. I. Murphy, Pipestone County, Havre, 103 bls. rags.
Castle & Overton, Inc., Eupatoria, Germany, 2,278 bls. wood pulp.
Castle & Overton, Inc., Manchester Hero, England, 183 bls. rags.
Castle & Overton, Inc., Capulin, England, 415 bls. rags.
Castle & Overton, Inc., Napierian, Ireland, 165 bls. rags.
E. J. Keller Co., Inc., Nobles, ——, 192 bls. rags.
E. J. Keller Co., Inc., London Shipper, ——, 74 bls. old rope.
E. J. Keller Co., Inc., Berengar, ——, 340 bls. wood pulp.

Piqua Strawboard Mill Motorized

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, November 12, 1928.—The plant of the Piqua Straw Board Company at Tippecanoe City, just northeast of Dayton, has been motorized and other improvements completed and now is one of the most modern mills of its kind in this section of the country.

This is the mill that formerly was owned by the old American Straw Board Company. In recent years it has been in other hands and now is operated and owned by Piqua business men.

Some time ago a sudden shutdown was necessitated by an accident in the engine room. When it became necessary to make repairs to the engine the owners immediately arranged to install motors and now the Dayton Power and Light Company, of this city, is supplying the power. It means the beginning of operations, the like of which may be followed in other Miami Valley mills close enough to Dayton to obtain current from the Dayton Power and Light Company. This concern is a subsidiary of one of the largest electrical systems in the country, and has a gigantic power house at Miller's Ford, at the southern edge of Dayton. It is extending to surrounding towns and already supplies current to Piqua, Xenia, Wilmington, Washington C. H., and in points extending to the southern section of the valley where most of the paper mills are located.

In Dayton, the company also furnishes power to a number of paper plants.

The Tippecanoe City plant is an independent one in the straw board business and has built up a large business. At present it is giving employment to 80 persons and in the industry is recognized as one of the most substantial in the town.

Kalbfleisch Issues Chemical Purchasing Guide

A new and complete chemical handbook has just been published by The Kalbfleisch Corporation. This book is much more comprehensive and interesting than the conventional catalog, containing eighty-four pages of chemical facts, valuable tables, and is generously illustrated.

This Kalbfleisch book is designed to simplify the purchase of chemicals, and to make it an exact and economical operation. In value of contents and attractive appearance this book is worthy of a prominent place on every purchasing agent's desk. Copies may be obtained without charge upon request to The Kalbfleisch Corporation, 200 Fifth avenue, New York City.

Straight Line Trucking

The Stuebing Cowan Company at Cincinnati, in collaboration with their railroad representatives, Leeds, Tozzers & Co., Inc., 75 West street, New York, have just issued an interesting pamphlet entitled "Straight Line Trucking" which describes the use of the lift truck platform system by railroads and other common carriers.

The book consists of sixteen pages and shows numerous reproductions of photographs illustrating the handling of materials in the stores department and machine shops and the handling of freight at railroad and steamship terminals. The pamphlet appears at the psychological moment when the whole question on the economies to be achieved by consolidating less than carload freight shipments on skid platforms is being actively considered by the shippers and officials of the transportation companies. A copy of this pamphlet will be mailed free to any one upon request.

Bemis Bro. Co. Gets Mill Contract

TALLADEGA, Ala., November 5, 1928.—The Bemis Brother Bag Company has awarded a contract for the construction of its proposed new cotton mill at Bemiston, near here. Contracts for machinery and construction of a mill village will be let later. The total cost of the project will be about $3,000,000. The plant will consist of employees' houses and five buildings as follows: main building, two-story, 643x150 feet; warehouse, one-story, 800x100 feet; weave shed, one-story and basement, 664x148 feet; picker room, two-story, 182x83 feet, and power house. The mill will be equipped with about 33,000 spindles and 750 looms. Cloth will be manufactured for use in the company's bag factories, which number fifteen and are located in various parts of the country.

Serious Fire Averted at Champion Mill

[FROM OUR REGULAR CORRESPONDENT]

CARTHAGE, N. Y., November 5, 1928.—A serious fire in the Champion Paper Mills was averted last week through quick action by the Carthage fire department. The blaze was discovered by an employee who turned in the alarm. The fire originated in what is known at the lower office or stock room. The firemen used two streams in quenching the flames which for a time threatened to spread to other sections of the structure. The new building being constructed by the Taggert Brothers Paper Company for the manufacture of paper bags was in no way damaged, the blaze being confined entirely to the old plant.

THE
"TRIMBEY-SHEVLIN"
A NEW PULP—

Screens 80 to 100 Tons Ground Wood per Day
Consistency—Screened Stock 0.8% to 1% Air-Dry
Requires only 25 to 30 Horse Power
Employs Only One-Half Usual Number of Deckers
Entirely Self-Cleaning
No Showers, No Thinning Water, No Wash Water.

A Pulp Screen Which is a Worthy Companion to The Trimbey Automatic Consistency Regulator and The Trimbey and Tibbitts Proportioning and Metering System

Ask Us

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Glens Falls, N. Y.

Made in Canada? Yes.

PQ

Does your butcher's paper act as blotting?

Blotting paper should be thirsty but not so, butcher's paper. Butcher's paper has to prevent moisture penetration. In one recent demonstration, five per cent of "S" Brand silicate of soda used in butcher's paper made a sheet with four times greater moisture resistance and 8.9% greater strength. "S" Brand helps make better butcher's and also better writings, better book. Send for full particulars about a trial in your mill.

Philadelphia Quartz Co.
SILICATE HEADQUARTERS
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Ferguson customers include:

Hinde & Dauch Co. — Spencer-Wynne Paper Products Company
A. P. W. Paper Co. — Bennington Wax Paper Company
Mead Pulp and Paper Co. — Oswego Falls Corp.
Chillicothe Paper Co. — Fairfield Paper Co.
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Purity 99½%

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41 E. 42nd Street New York City
Mine Gulf, Matagorda County, Texas

Paper Mill Stocks and Bonds

Quoted by Taylor & White, 45 Wall street, New York City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	ASKED
Abitibi Power & Paper 5s, 1943	90	91
Abitibi Power & Paper 6s, serially to 1934	100	102
American Writing Paper 6s, 1947	81	87
Bastrop Pulp & Paper 6½s, 1940	103	105½
Bedford Pulp & Paper 6½s, 1942	97	100
Belgo-Canadian Paper 6s, 1943	100	103
British-Columbia Pulp & Paper 6s, 1950	89	92
Brown Paper Mills Serial 6s, 1941	97	100
Brown Company 5½s, 1946	98	101
Bryant Paper 6s, 1942	98	101½
Canadian Paper Board 7s, 19337	97	99½
Cape Breton Pulp & Paper 6s, 1932	103	...
Celotex Company 6s, 1929	95	99
Celotex Company 6½s, 1939	100	102
Celotex Company of Chicago, Debenture 6s, 1936	95	98
Central Paper Company Serial 6½s, 1942	86	89
Central Paper 7s, 1934	78	...
Champion Coated Paper Serial 6½s, 1934	100	...
Champion Coated Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 8s, 1930	95	...
Champion Paper Corp. 6s, 1945	95	98
Container Corp. of America Debenture 6s, 1936, ex-warrants	101	104
Continental Paper Products 6½s, 1943	90	99
Cornell Wood Products 7½s, 1937	103	...
Crown Willamette 6s, 1951	101	102
Della Paper & Pulp Serial 6s, 1938	95	98
Dixon Board Mills Serial 6s, 1942	80	...
Donnaconna Paper 5½s, 1948	93	...
Eastern Manufacturing Co. 7s, 1938	97	100
Escanaba Paper Serial 6s, 1939	98	100
Escanaba Paper 6½s, 1935	96	99
Filer Fibre Serial 7s, 1935	90	95
Fort Irange Paper 7s, 1942	101	...
Fort William Paper 6s, 1946	100	104
Fraser Company 6s, 1950	103	105
Hammermill Paper Serial 6s, 1939	100	...
Hawley Pulp & Lumber 6s, 1946	96	...
Hawthorne Paper Company 6s, 1937	80	...
Hoberg Paper & Fibre 7s, 1937	94	97
Industrial Fibre Corp. Debenture 8s, 1933	100	...
Itasca Paper & Prairie River Power Serial 5½s, 1938	99½	...
Itasca Paper & Prairie River Power Serial 6s, 1938	99	...
Jessup & Moore First 6s, 1945	83	90
Kalamazoo Vegetable Parchment 6s, 1938	99	101
Lake Superior Paper 6s, 1941	105	108
Marathon Paper Mills Serial 5½s, 1942	99	101
Marinette & Menominee 7½s, 1936	103	105
Mead Pulp & Paper 5% Notes Serially, 1937	95	100
Mead Fibre 7s, 1937	97	101
Minnesota Ontario Paper Serial 6s, 1945	97½	100
Murray Bay Paper Serial 6½s, 1947	102	105
Munissing Paper Serial 6s, 1936	98	...
Nekoosa Edwards Paper 6s, 1928-42	96	...
Ontario Pulp & Paper 6s, 1931	108½	110½
Orono Pulp & Paper 6s, 1943	99	...
Orono Pulp & Paper 5s, 1941	96½	...
Oswego Falls Corp. 6s, 1941	99	102
Parker-Young Company 6½s, 1944	98	100
Paterson Parchment Paper 6s, 1938	101	103
Penobscot Chemical Fibre 6s, 1942	102	105
Port Alfred Pulp & Paper 5½s, 1947	98	100
Price Brothers 6s, 1943	105	...
Provincial Paper 5½s, 1947	98½	...
Queen City Paper 7s, 1933	98	...
River Raisin Paper 6s, 1936	98	100
Riordan Pulp & Paper 6s, 1942	102	104
Rolland Paper 6s, 1937	99	101
St. Croix Paper Serial 5s, 1937	99	...
St. Helen Pulp & Paper 6½s, 1931	99	102
St. Maurice Valley Corp. 6s, 1945	101	104
St. Maurice Valley Corp. 5½s, 1947	98½	100½
St. Regis Paper of Canada 6s, 1931	100	101½
St. Regis Paper of Canada 6½s, 1934	100	102
Smith (Howard) Paper Mills 7s, 1941	104	106
Spanish River Pulp & Paper 6s, 1931	108	110
Stevens-Thompson Paper 6s, 1942	94	96
Taggart Brothers 6s, 1944	95	100
Tait Paper & Color Industries 6s, 1934	88	92
Ticonderoga Pulp & Paper 5s, 1930	94	...
Ticonderoga Pulp & Paper 6s, 1940	100	102
Tomahawk Kraft Paper 6s, 1938	98	...
Tomahawk Pulp Paper 7s, 1932	99	...
Tonawanda Paper 5½s, Series 1941	99	102
Union Bag & Paper Power 6s, 1932	98	100
United Wall Paper Factories 6s, 1947	96	99
Warren (S. D.) Company 6s, 1945	103	105
Watab Paper 6½s, 1942	102	...
Waterway Paper Products 6s, 1931	100	101½
Wayagamack Pulp & Paper 6s, 1951	103	105
Westfield River Paper Serial 7s, 1943	89	93
Whitmer-Parson Pulp & Lumber 8s, 1938	20	25
Whitaker Paper 7s, 1942	108	110

STOCKS	BID	ASKED
American Box Board, Pfd.	9¼	10¼
American Box Board, Com.	9¼	10¼
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P. Pfd.	65	75
Brompton Pulp & Paper, 8% Pfd.	100	...
Champion Fibre, 7% Pfd.	108	110
Diem & Wing, 7% Pfd.	92	97
Eastern Mfg. Co. 1st Pfd.	55	...
Great Northern Paper, Com.	75	78
Hammermill Paper, new 6% Pfd.	100	...
Hinde & Dauch, Com.	125	None Off.
Hinde & Dauch, 6% Pfd.	102	None Off.
Holyoke Card & Paper	160	None Off.
Marathon Paper Mills, Com.	150	...
Mengel Co., Pfd.	102	104
Midwest Box Co., 8% Pfd.	98	102
Midwest Box Co., 6% Pfd.	95	99
Louis De Jonge Co., 7% Pfd.	94	97
Oxford Papers, Com.	195	...
Oxford Paper Co., Pfd.	108	111
Penobscot Chemical Fibre, Com.	80	...
Richardson Co., Com.	170	...
Sabin Robbins Paper Co., 8% Pfd.	105	110
St. Croix Paper	155	...
St. Regis Paper Co., 7% Cum. Pfd.	105	108
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp and Paper Company	55	57
West Virginia Pulp and Paper, Pfd.	100	103
Whittaker Paper, 7% Cum. Pfd.	105	None Off.

Box Board Production for September

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., November 12, 1928.—September production of box board, based on reports to the Department of Commerce by 93 firms operating 120 plants (reports for earlier months including four concerns now out of business) was 85.4 per cent of capacity, as compared with 85.6 per cent in August and 82.0 per cent in September, 1927. In the following table the capacity data vary according to the normal number of working days in each month:

Year and Month	Operation: Inch hours Capacity	Operation: Inch hours Operated	Operation: Per cent of Capacity	Production: Short Tons Capacity	Production: Short Tons Output	Production: Per cent of Capacity	New Orders (Short Tons)	Unfilled Orders (end of month) (Short Tons)
1927								
Jan.	10,474,300	6,998,505	66.8	275,100	173,629	63.1	194,285	105,669
Feb.	10,055,328	7,583,477	75.4	264,096	189,273	71.7	183,861	102,005
March	11,312,244	8,627,946	76.3	297,108	219,824	74.0	230,065	114,369
April	10,893,272	7,771,040	71.3	286,104	205,589	71.9	197,435	101,861
May	10,474,300	7,836,315	74.8	275,100	200,216	72.8	194,122	93,248
June	10,893,272	8,277,054	76.0	286,104	214,704	75.0	213,735	94,847
July	10,474,300	7,443,012	71.1	275,100	190,406	69.2	213,649	109,616
Aug.	11,312,244	8,877,682	78.5	297,108	232,587	78.3	227,978	106,076
Sept.	10,474,300	8,673,208	82.8	275,100	225,617	82.0	235,936	116,383
Total (9mos.)	96,363,560	72,088,239	74.8	2,530,920	1,851,845	73.2	1,891,066	.....
1928								
Jan.	10,372,900	7,833,458	75.5	273,125	203,882	74.6	204,128	80,417
Feb.	10,372,900	8,136,737	78.4	273,125	211,862	77.6	215,333	85,862
March	11,312,244	8,843,542	78.2	297,108	227,344	76.5	244,871	93,380
April	10,474,300	8,311,710	79.4	275,100	221,079	80.4	211,304	84,513
May	10,893,272	8,733,965	80.2	286,104	242,394	84.7	224,366	73,157
June	10,893,272	8,199,515	75.3	286,104	228,646	79.9	228,252	77,782
July	10,474,300	7,992,170	76.3	275,100	201,153	73.1	209,976	79,492
Aug.	11,312,244	*9,236,068	*81.6	297,108	*230,750	*77.7	*236,682	*81,816
Sept.	10,055,328	8,346,840	83.0	264,096	227,421	86.1	234,458	87,262
Total (9mos.)	96,160,760	75,634,005	78.7	2,526,970	1,994,531	78.9	2,009,370	.....

Year and Month	Shipments of boxboard (Short Tons)	Stocks of boxboard, end of month (Short Tons)	Consumption of waste paper: Capacity (Short Tons)	Consumption of waste paper: Consumed (Short Tons)	Per cent of Capacity	Stocks of waste paper, end of month: At plants (Short Tons)	Stocks of waste paper, end of month: In transit and unshipped purchases (Short Tons)
1927							
January	175,528	53,562	256,450	163,337	63.7	163,023	38,062
February	189,032	53,327	246,192	182,322	74.1	158,222	40,602
March	217,876	54,566	276,966	209,730	75.7	155,513	43,789
April	209,944	50,211	266,708	189,942	71.2	147,938	46,314
May	201,788	48,906	256,450	193,077	75.3	149,438	59,289
June	211,828	52,452	266,708	207,187	77.7	151,671	43,807
July	194,285	49,307	256,450	182,283	71.7	150,709	51,255
August	229,722	52,071	276,966	227,907	82.3	128,818	70,035
September	228,213	42,923	256,450	216,652	84.5	126,548	51,441
Total (9 mos.)	1,858,216	.....	2,359,340	1,772,437	75.1	.....	.....
1928							
January	196,984	49,032	255,225	189,744	74.3	153,747	62,181
February	209,477	50,350	255,225	193,966	76.0	140,104	60,038
March	237,621	40,439	276,966	209,649	75.7	139,255	47,322
April	220,315	40,319	256,450	211,898	82.6	132,621	47,551
May	235,794	49,107	266,708	220,750	82.8	127,217	46,375
June	223,901	53,560	266,708	204,468	76.7	130,484	43,480
July	203,741	49,969	256,450	190,810	74.4	132,265	62,056
August	*233,104	*47,709	276,966	*213,626	*77.1	*117,009	*48,108
September	229,460	45,815	246,192	234,760	95.4	117,487	52,705
Total (9 mos.)	1,990,397	.....	2,356,890	1,869,671	79.3	.....	.....

* Revised.

New Officers Southern Paper Trade

The new officers of The Southern Paper Trade Association are as follows:

President—H. T. Newell, Jackson Paper Company, Jackson, Miss.; Vice-President—H. Bouis, Palm Beach Paper Co., West Palm Beach, Fla.; Secretary-Treasurer—L. M. Hall, Archer Paper Company, Chattanooga, Tenn.

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HAMILTON, OHIO.
BRANCH—CLEVELAND, OHIO

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, November 14, 1928.

Business in the local paper market during this past week was moderately active. Most of the various grades have enjoyed a fair demand and supplies are moving into consumption at a steady rate. Prices adhere to schedule and little or no shading has been reported. Sales forces of the leading paper houses expect to transact a good volume of business before the end of the year. News print production is increasing and shipments on contract are moving steadily into consumption. The rate of production is approximately 80 per cent of total capacity. News print prices on contracts made for 1929 show substantial reductions.

Box board is moving into consumption satisfactorily. Paper board is in good request. Prices are generally steady. The different varieties of fine papers continue to enjoy a fair demand with prices holding up to former levels. Tissues are in good request. The coarse paper market is showing a strong undertone and manufacturers predict substantial business ahead. Wrapping paper is still going forward heavily. No changes in price have been reported.

Mechanical Pulp

No marked changes were manifested during the past week in the ground wood market. Both imported and domestic mechanical pulp are being offered at a rate that is about adequate for the prevailing demand. Contract withdrawals are moving satisfactorily. Prices generally adhere to schedule and there are few indications of concessions.

Chemical Pulp

The tone of the chemical pulp market is fair, the various grades being in satisfactory demand. Most producers report that they are sold well ahead on contract. In some cases lower rates on deliveries for the current year have been accepted.

Old Rope and Bagging

On changes are apparent in the old rope market. Both the domestic and imported product are in fairly active request. Shipments of manila rope are moving normally and prices are generally stable. Activities in the bagging market are still largely routine. Roofing bagging continues to move rather slowly. Scrap bagging is in light request. Prices in general are steady.

Rags

Business in the rag market during the last week has been chiefly seasonal. The demand for domestic cotton cuttings was fair, but roofing grades are only in light request. The foreign rag market continues somewhat dull. Quotations on the different grades of domestic and imported rags adhere to recent schedules.

Waste Paper

The paper stock market continues to exhibit a strong undertone. Book stock is in excellent demand. Prices are steady. Hard white and soft white shavings are going forward rapidly, as are the various grades of waste paper used in the board mills. Old kraft machine compressed bales are moving rapidly into consumption. Prices are firm.

Twine

A satisfactory volume of business was transacted in the twine market during the past week. Wrapping paper enjoyed an excellent demand. The different grades of twine have been in fair request. Producers expect to book some good orders before the end of the year.

Program for Boston Paper Meeting

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., November 12, 1928.—The complete program of the fall meeting of the Boston Paper Trade Association to be held at the Exchange Club November 21, includes the following.

Dr. Rollo Watter Brown, a widely known author, will give an address on "The Creative Spirit and Business". Dr. Brown was professor of English at Wabash College and Carleton College, and has been a lecturer on English University. Two of his recent works are "An Inquiry into American Life" and "The Life of Dean Briggs". E. W. Cunningham, sports writer for the Boston Post, will discuss "Football". Mr. Cunningham is well equipped to handle this subject. He was an outstanding player at Dartmouth College and was chosen for the All-American football team. Music will be furnished by the Allen H. Daugherty Trio.

The membership committee has approved the following applications:

Regular membership—Courtlandt B. Griffin, vice president, Carew Manufacturing Company, South Hadley Falls, Mass., proposed by Charles S. Proctor; Paul F. Moore, vice president, Westfield River Paper Company, Inc., Russell, Mass., Proposed by Secretary F. Bendel Tracy; Alden W. Howard, president, Howard Paper Company, Boston, Mass., proposed by the secretary.

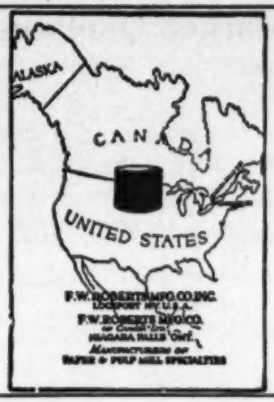
"Limited" or "Special" membership—Fred B. Korbel, P. P. Kellogg Company Div., Springfield, Mass., proposed by Wm. N. Stetson, Jr.; Aaron P. Mitchell, Warren Manufacturing Company, New York, N. Y., proposed by P. B. Von Olker; Roger B. Taft, Hammermill Paper Company, Erie, Pa., proposed by W. B. Stevenson; Richard H. Campbell, Linton Brothers & Co., Fitchburg, Mass., proposed by Norman Harrower.

Accompanying the notice of the meeting is a copy of the amendment to the by-laws, providing for "limited" or "special" membership which was unanimously adopted at the meeting of June 12, 1928.

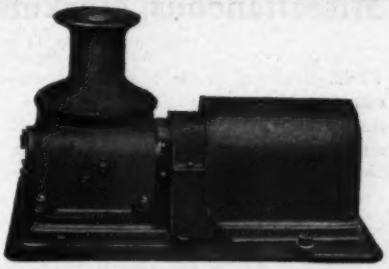
Pillsbury Flour Co. To Buy Paper Mill

MINNEAPOLIS, Minn., November 12, 1928.—The Pillsbury Flour Mills Company of Minneapolis is negotiating for the purchase of the Harvey Paper Co., Wellsburg, W. Va., manufacturers of heavy paper for sacks for packing flour and other cereal products. While the Harvey plant now produces only bag paper, the Pillsbury management is planning to extend operations to manufacture of bags.

BURRS



BURRS



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Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, November 14, 1928.

BLANC FIXE.—Trading in the blanc fixe market during the past week continued fairly active. Manufacturers reported that new contracts are coming in very satisfactorily. Prices are unchanged, the pulp selling at from $42.50 to $45.00 per ton, in bulk, and the powder at from 3½ cents to 3⅝ cents a pound, in barrels, at works.

BLEACHING POWDER.—Manufacturers of this product have announced that the contract quotations for the current year will be extended for 1929. Bleaching powder still enjoys an increased demand. Quotations are from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—The demand for casein remains active, with practically no change in prices. Domestic casein is selling at from 15½ cents to 17 cents per pound; the imported is quoted at from 16 cents to 16½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Manufacturers of caustic soda have announced that no change will be made in the contract prices for the forthcoming year. Solid caustic soda now sells at from $2.90 to $2.95. The flake and the ground are quoted at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Producers report a heavy movement in china clay. Prices are steady. Imported china clay is selling at from $15 to $25 per ton, ship side. Domestic paper making clay is quoted at from $8 to $9 per ton, and pulverized at from $10 to $12 per ton, at mine.

CHLORINE.—Following the announcement of a reduction of half a cent per pound on all contracts for 1929, producers of chlorine report almost all contracts for the next year booked. The market is strong, showing an increased demand since the last quarter. Stocks have been reduced materially. No cuts in price are expected. Chlorine is selling at 3 cents per pound, in tanks, or multi-unit cars, at works, on contract orders, and at 4½ cents per pound, in cylinders, car lots, at works.

ROSIN.—Business in the rosin market continues moderately active. At the naval stores those grades of gum rosin used in the paper mill are still quoted at from $9.35 to $9.40 per 280 pounds, ex dock, in barrels. Wood rosin is selling at from $7.15 to $7.95 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Production of salt cake continues adequate for the current demand. The market is steady and prices are unchanged. Salt cake sells at from $15 to $17 per ton, and chrome salt cake is quoted at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—Manufacturers have announced that contract quotations on soda ash for the forthcoming year will be unchanged from the current level. Contract prices on soda ash, in car lots, at works, per 100 pounds, according to grade, are still: in bags, $1.32½, and in barrels, $1.55.

STARCH.—Transactions in the starch market during the past week were conducted along routine lines. Supplies continued to move into consumption normally. Prices previously quoted still hold good. Special paper makers' starch is quoted at $4.07 per 100 pounds in bags, and at $4.24 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—The sulphate of alumina market continues to exhibit a strong undertone. There is a persistent demand for this product. No changes in price have been reported. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.55, the iron free at from $1.90 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—The sulphur market is in a sound position. Shipments on contract are moving into consumption satisfactorily and inquiries for future business are numerous. Prices are firm. Sulphur is quoted at from $18 to $19 per ton, in bulk, at mine, on contract. The spot quotation is $20 per ton.

TALC.—Business in the talc market during the past week was largely routine. Prices are unchanged. Domestic talc is quoted at from $16 to $18 per ton, at eastern mines.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
News—		
Rolls, contract	3.25	@ —
Rolls, transient	3.25	@ 3.50
Sheets	3.65	@ 3.85
Side Runs	3.00	@ 3.75
Book, Cased—		
S. & S. C.	6.35	@ 7.75
M. F.	6.25	@ 7.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.70	@ .80
Kraft	1.00	@ 1.10
Manila	.70	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	4.50	@ 4.75
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00
(Delivered New York)		
Boards—per ton—		
News	42.00	@45.00
Straw	52.50	@55.00
Chip	42.50	@45.00
Binders' Boards	65.00	@67.50
Sgl. Mla. Ll. Chip.	51.00	@52.90
Wood Pulp	80.00	@85.00
Container	55.00	@62.50
85 Test Jute Liner.	55.00	@57.50

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@31.25
Dry	32.00	@34.00
(F. o. b. Mill)		
No. 1 Domestic	26.00	@29.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.65	@ 4.40
Easy Bleaching	2.80	@ 2.90
No. 1 strong unbleached	2.50	@ 2.75
Mitscherlich unbleached	2.55	@ 3.25
No. 2 strong unbleached	2.40	@ 2.60
No. 1 Kraft	2.50	@ 2.75
No. 2 Kraft	2.40	@ 2.50
Sulphate—		
Bleached	3.75	@ 3.85
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.65
Mitscherlich	3.00	@ 3.70
Kraft (Domestic)	2.50	@ 3.30
Soda Bleached	3.15	@ 3.30
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.50	@ 1.65

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.25	@ 7.75
New Unbleached	10.50	@11.00
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	6.75	@ 7.25
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.25	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75
Old Rags		
White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.50	@ 6.25
No. 3 White Linens	4.50	@ 5.00
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.25	@ 2.50
German Blue Linens	2.50	@ 2.75
German Blue Cottons	2.00	@ 2.25
Checks and Blues	1.75	@ 1.90
Lindsay Garments	1.85	@ 1.90
Dark Cottons	1.65	@ 1.75
Old Shopperies	1.55	@ 1.65
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.60	@ 1.70
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, heavy	1.60	@ 1.65
Bright Bagging	1.60	@ 1.65
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	3.35	@ 3.65
Domestic	3.25	@ 4.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.55	@ 2.65
White envelope cuttings	3.25	@ 3.50
Flat Stock—		
Stitchless	1.60	@ 1.70
Overissue Mag.	1.60	@ 1.70
Solid Flat Book	1.50	@ 1.60
Crumpled No. 1	1.15	@ 1.25
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.60	@ 1.75
Manilas—		
New B. B. Chips	.65	@ .75
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.80	@ .85
Container	.72½	@ .77½
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.85	@ 1.95
News—		
No. 1 White News	1.75	@ 1.80
Strictly Overissue	.85	@ .95
Strictly Folded	.75	@ .85
No. 1 Mixed Paper	.60	@ .65
Common Paper	.35	@ .44

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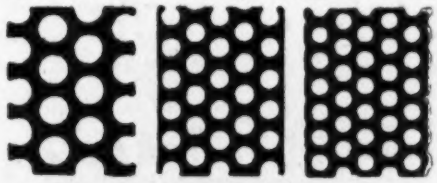

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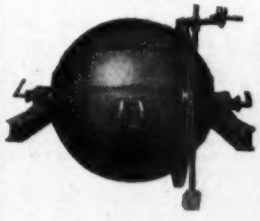

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Twines

(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Varnished India—			
Basis	.13	@	.14
Paper Makers Twine Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Ameri. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05½	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05½
No. 2 Manila	.04¾	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	.03¾	@	.04
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
(Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.80	@	2.90
White Env. Cuttings	2.90	@	3.00
No. 1 Soft Shavings	2.50	@	2.60
No. 1 Mixed	1.00	@	1.05
No. 2 Mixed	.90	@	1.00
Ledger & Writings	1.55	@	1.65
Solid Books	1.25	@	1.35
Blanks	1.70	@	1.80
Krafts	1.90	@	2.05
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.55	@	1.65
Print Manila	.90	@	1.00
Folded News (oversize)	.65	@	.75
Old Newspapers—			
No. 1	.65	@	.75
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.70	@	.80
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Labe	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.08½	@	.09
Manil Sul., No. 1	.04½	@	.06
Manil No. 2	.04	@	.04½
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.07	@	.07½
Common Bogus	.03	@	.03½
Straw Board	52.50	@	75.00
News Board	45.00	@	—
Chip Board	42.50	@	—
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	80.00		
No. 2, per ton	75.00		
Carload lots	60.00	@	70.00
Tarred Felts—			
Regular	53.00	@	55.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.44	@	1.54
Best Tarred, 3-ply	1.93	@	2.08

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Washable, No. 2	.03	@	.03½
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	.08
New Blue	—	@	.04
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03¾
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.65	@	1.80
Domestic	1.75	@	2.00
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.15	@	1.25
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.80	@	1.90
Writing Paper	1.70	@	1.75
No. 1 Books, heavy	1.50	@	1.60
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common Paper	.60	@	.65
No. 1 Mixed Paper	.65	@	.70
Straw Board, Chip	.65	@	.75
Binders Board, Chip	.65	@	.75
Overissue News	.90	@	.95
Old Newspaper	.70	@	—

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2—			
Repacked	3.25	@	3.50
No. 2	2.90	@	3.00
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.25	@	—
No. 5A	.85	@	.90
B	.80	@	.90
C	.70	@	.80
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.70	@	1.85

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05½	@	.06½
No. 2 Kraft	.04	@	.04¾
Common Bogus	.02	@	.02¾
Delivered New England points			
Straw Boards, rolls .009			52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board			45.00
Chip Board			42.50
Single Manila Pulp Lined Board	52.50	@	57.50
Single White, Patent Coated Newsboard Bender	70.00	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.55	@	1.60
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.20	@	1.25
White Blank News	1.70	@	1.75
Old Kraft	1.90	@	2.00
Print Manila	.80	@	.90
No. 1 Mixed Paper	.55	@	.60
Overissue News	.85	@	.90
Old Newspapers	.75	@	.80
Box Board, Chip	.65	@	—

Bagging

(Price f. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.50
Manila Rope—			
Foreign	3.25	@	3.50
Domestic	3.25	@	3.50
Mixed Strings	.90	@	1.00
Jute Wool Strings	—	@	1.00
Scrap Burlaps	1.25	@	1.45
Scrap Sisal	1.50	@	1.75
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	—	@	1.50
New Burlap Cutting	1.90	@	2.00

Domestic Rags (New)

(Price f. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09	@	.10
Silesias, No. 1	.06	@	.06½
New Unbleached	.09½	@	.10
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06	@	.06½
New Black, soft	.04	@	.04½
Khaki Cuttings	.04	@	.04½
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)

(Price f. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	—	@	2.50
Thirds and Blues—			
Repacked	2.00	@	2.15
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.55	@	1.60
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.25	@	5.50
New Checks & Blues	4.25	@	4.50
Old Fustians	1.90	@	—

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	14.50	@	—
No. 2 Coated and Litho	13.50	@	—
No. 3 Coated and Litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

Pulp

(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.80	@	—
No. 1 Mixed Paper	.70	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.11½	@	—
Fancy Shirt Cuttings	.05½	@	—

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This man *knows* at a glance which of his drying rolls is doing its work and which are loafing on the job — cold and waterlogged.

All he does is to press the thermocouple onto the surface of the moving roll and read the temperature on the dial. The scale range from 50° to 400° F. is ample for most requirements but special ranges can be supplied if desired.

Cambridge Surface Pyrometer

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ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SEVENTH YEAR

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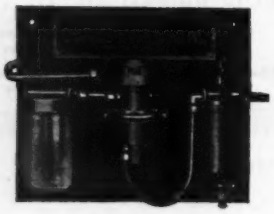
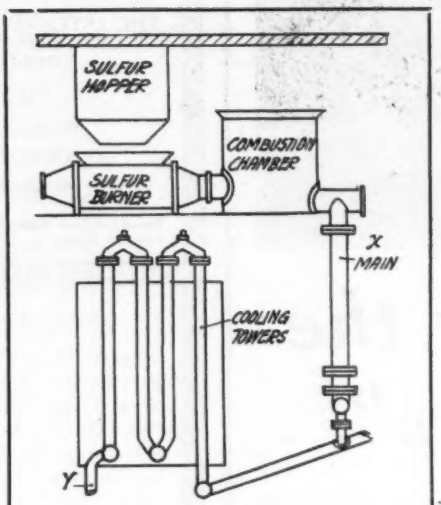
Correct Points for Sampling SO_2 in Sulphite Pulp and Acid Plants

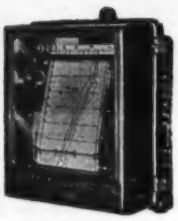


ENGELHARD SO_2 Analyzer

makes possible economies in sulphite pulp mills or in acid plants. It works continuously and electrically, warning the operator in advance of trouble. Simple in construction and operation, it is the most accurate gas analyzer in industrial plants.



In sulphite pulp manufacture, gases are sampled at "X" close to the combustion chamber, so that any change in percentage of SO_2 will be registered as soon as possible. In sulfuric acid plants, gases are sampled at "Y" to show any air leaks in the coolers and indicate the source of trouble.



Type S Recorder

electrically and continuously makes a graphic record of SO_2 analyses. It is calibrated for 0-20% for sulphite pulp manufacture, and 5.5 to 10.5% for acid making. It can make up to 6 records at once and can show temperature along with SO_2 percentages

Accurate continuous measurement of the percentage of SO_2 from sulphur burners in the manufacture of sulphite pulp and sulphuric acid is now possible simply and easily with *Engelhard* SO_2 Recording Analyzer.

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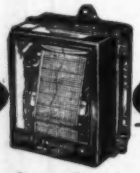

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